LEPP Newsletter—Summer 2017

Program Updates

Ann D'Alfonso

As most of you know, dealing with issues regarding onsite waste systems and small lot sizes is an ongoing challenge. During the last round of sanitarian meetings in December I had mentioned developing a two day workshop focused on low pressure pipe and information on Alternative Treatment Units or ATU systems.

Unfortunately, due to federal budget restraints and time restrictions we were unable to have the workshop this past spring. This however, has not hampered the LEPP team's goal of developing new continuing education opportunities for sanitarians and will hopefully have a workshop/ training this fall. We will keep everyone up-to-date on educational opportunities via the LEPP newsletter.

I would also like to direct everyone's attention to the *Announcements* page of the LEPP newsletter in regards to Septic Smart week. This year's Septic Smart week will be September 18-22. I would encourage all of you to take a moment and look at the resources that are available on line. EPA has some new materials available that I think are very useful, please see the link provided. https://www.epa.gov/septic/septic-systems-outreach-toolkit

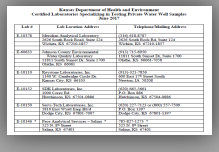
As always if there is ever anything the LEPP team can assist you with please do not hesitate to call.

Go to LEPP Contact Information

Inside this issue:

UPDATED CERTIFIED LABS LIST…

We received an updated Private Water Well Testing Labs list. Click on the thumbnail to the right, or find it attached to the email containing the *Summer 2017 LEPP Newsletter.*



Staff Update

LEPP welcomes WMS staff member Travis Daneke to the LEPP team.

Travis has lived in NE Kansas his entire life. He received his BS in Environmental Studies from the University of Kansas in 2003.

The first 3 years after college, Travis served as the water quality coordinator with the Douglas County Conservation District and as Program Director for Kansas StreamLink, a non-profit organization specializing in water quality education.

Finding his way to KDHE in 2007, Travis spent 9-years with the Bureau of Environmental Remediation where he managed hazardous waste at Department of Defense Sites across the state.

Travis is an avid outdoorsman and enjoys coaching little league soccer and baseball. Much of his spare time is spent on family adventures with wife Debbie and 2 children, Kenzie and Cooper.

Class V Wells

Large Capacity Septic Systems

Brandy DeArmond, P.G., Chief, Kansas Department of Health and Environment Underground Injection Program

In general, Class V Injection Wells are shallow Injection Wells that inject fluids either into or above an underground source of drinking water (USDW). This method of disposal, coupled with little to no pretreatment, can easily threaten groundwater quality if not properly managed. Regardless of the type of Class V Injection Well, the owner and operator of the well are responsible for protecting the USDW from contamination.

The phrase "Injection Well" is somewhat misleading because it brings to mind a fluid under pressure being forced into the ground; however, the Environmental Protection Agency's (EPA) definition of injection is simply "the subsurface emplacement of fluids into a well". What qualifies as a well? Surely a septic system isn't an Injection Well? Actually, the Kansas Annotated Regulations (K.A.R.) 28-46-2a define a "well" as any of the following:

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(B) a dug hole whose depth is greater than the largest surface dimension;

(C) a sinkhole modified to receive fluids; or

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So, a septic system, which is an on-site method of treating and disposing of sanitary wastewater, is considered a type of well. However, only LCSSs, not single-family home septic systems, are considered Class V Injection Wells. A septic system is considered an LCSS if it receives only sanitary waste from 1) multiple dwellings, or 2) a non-residential establishment with the capacity to serve 20 or more people per day, on any one day per year. According to the EPA, LCSSs may be found at "apartment buildings, trailer parks, schools and religious institutions, office, industrial and commercial buildings, shopping malls, state parks and campgrounds, recreational vehicle (RV) parks, highway rest areas, train and bus stations, hotels and restaurants, and casinos."

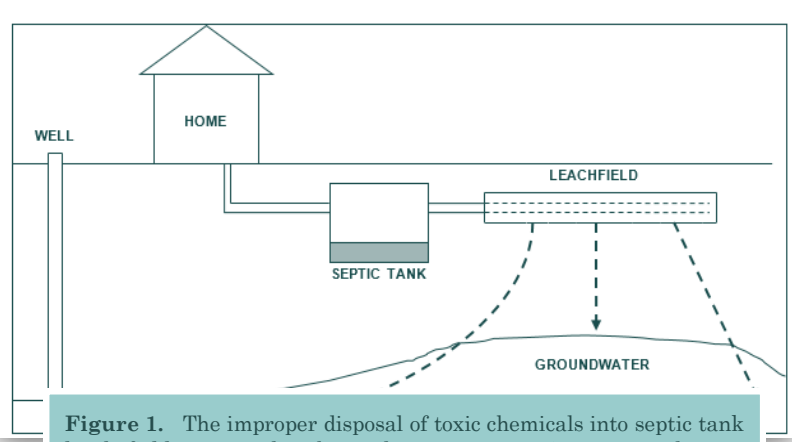

Figure 1. The improper disposal of toxic chemicals into septic tank leach field systems has been shown to contaminate groundwater, which could affect drinking water.

Sanitary wastewater, or domestic wastewater, is defined as wastewater originating primarily from kitchen, bathroom, and laundry sources, including waste from food preparation, dishwashing, garbage disposal grinding, toilets, baths, showers, and sinks.

Federal requirements prohibit injection that allows the movement of fluids containing any contaminants (such as pathogens, solvents, or heavy metals) into a USDW if the presence of that contaminant may cause a violation of any primary drinking water regulation or adversely affect public health. Contrary to common belief, neither the septic tank nor the leach field provides removal or treatment of most chemicals or contaminants. Most inorganics and organic pollutants are not removed and can migrate into the soil and groundwater. The primary purpose of a septic tank is to condition wastewater so that it will reduce clogging of the soil in the leach field. The leach field provides further treatment of the effluent by the removal of disease producing organisms by the percolation through the soil, exposure to air and filtration. If an LCSS is designed, operated, and maintained properly, it should not endanger the USDW (Figure 1).

When you are in the field, be on the lookout for LCSSs, and especially those being misused to dispose of something other than sanitary waste. An LCSS receiving only sanitary waste must be reported on the Class V Injection Well Inventory Report titled for that purpose. It is available at the link: http://www.kdheks.gov/uic/Class_5.htm.

(See the full article on pgs. 6-7)

Kansas Department of Health and Environment

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Lead in Private Drinking Water

Congress recently passed an amendment to the Safe Drinking Water Act (SDWA) that allows anyone to submit a water quality report to the EPA, when a water sample from a home or building contains elevated levels of lead. Notification procedures are already part of the public water supply compliance process, however these amendments will engage PWSs, state and local health agencies, and the EPA in additional (mainly educational) measures, regarding reducing risk of exposure to lead in drinking water.

The EPA's strategy for satisfying these amendments is available (draft) here: Strategic Plan for Targeted Outreach to Populations Affected by Lead.

What is most important to those working in the world of private drinking water wells is that the EPA may get reports of water samples with elevated lead levels from anywhere—including private water supply users. Therefore, as it will be outlined later in this article, there may be some involvement of local public health officials, when a report is made of lead in a private drinking water supply.

According to the EPA, the recent changes to the Notice to Person Served (Section 1414 (c)), requires that EPA work with states and public water suppliers (PWSs) to...

> *"notify and provide information to homes and communities once U.S. EPA receives drinking water data that indicates a household has drinking water levels above U.S. EPA's lead action level (0.015 mg/L). These notifications are in addition to those currently required under the existing Lead and Copper Rule."*

Under existing regulations, a PWS is responsible for sampling water throughout the supply and distribution system, and for reporting those to the primacy agency, or the entity within a state that is responsible for monitoring compliance of PWSs with drinking water regulations. In the event that sampling indicates lead in concentrations above its action level, then corrective actions are required, as well as notification of the supply users.

But under the Lead and Copper Rule, water quality reporting is conducted by the PWS, and monitoring and compliance is the responsibility of the state's designated agency (KDHE, for example). Detailed protocols are established for each of these areas of responsibility. The WIIN amendments reach a different end, providing the means by which a sample can be reported by anyone, results submitted to EPA, who will then (after a review of the report) notify the state's primacy agency, and subsequently, the provider of the water supply. Once the state and the provider of the water supply are notified, these entities are encouraged to provide education to any *affected population* (e.g. other tenants in a building, etc.) about reducing the risk of exposure to lead from drinking water, and any other pertinent information regarding the incident.

What if a report is made of elevated lead in a sample from a private drinking water supply in KS? In essence, once KDHE received notice of the reported sample from EPA, LEPP would be involved in assisting the local environmental protection authority (Sanitarian and/or Program Director of your county) with information to be disseminated to the *affected population.* In many cases, that might be simply the home/well owner themselves.

If you have questions about lead in drinking water, the impacts this and other contaminants may have on public health, please contact our office, and we will do our best to connect you to the information you need.

We have included a number of links and info related to this topic on the resources page of this newsletter. Here are a few links directly related to this article:

- Safe Drinking Water Hotline
- EPA Actions You Can Take To Reduce Lead In Drinking Water I/E Document
- How to Identify Lead-Free Certification Marks for Drinking Water System and Plumbing Products

Kansas Department of Health and Environment

Announcements

Rich Basore Retires

Ann D'Alfonso

When I first started with the Local Environmental Protection Program (LEPP) at KDHE, everyone told me to go talk to Rich Basore. People told me that if I needed anything, any type of help, technical assistance or someone who had a rich history with the program that could answer any question (and I mean any question) it would be Rich, and they were right.

Everyone in the Kansas onsite industry, sanitarians, regulators, or state professional acknowledge that he is a true resource and advocate for the program. Rich has always been an outspoken proponent for the importance of proper sanitation and the consequences of what could happen if we did not maintain the highest level of standards for the program.

I have recently learned that Rich has decided to start his well-deserved retirement on Friday June 30. I know that I am not alone in wanting to thank Rich for all of his knowledgeable advice, wonderful and heart felt support and his great personality. So I am going to end this announcement with the quote that could be found at the bottom of most of Rich's email, that I think sums up Rich.

"Coffee Tastes Better if the latrine is dug downstream of the encampment"
—U.S Army Field Manual 1861

Kansas Department of Health and Environment

KDHE Geology & Well Technology
Fall 2017 Seminar
Aug. 29-30th

flyer website agenda

2017 KSFA-KEHA
Joint Annual Conference & Trade Show
October 11-13, 2017
Holiday Inn, Wichita, KS

KEHA website **KSFA** website

NOWRA 2017
Onsite Wastewater Mega-Conference
October 22-25
Dover Downs Hotel & Casino, Dover, DE

Website

Check out the this Publication...

Tank Talk

From EPA's Decentralized Wastewater MOU Partnership

Via the SORA Website

SepticSmart Week 2017
September 18-22, 2017

Check the EPA Website for Updates

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Standard Resources

- Bulletin 4-2
- Environmental Health Handbook
- LEPP Website
- DASC—Kansas GIS Tool
- EPA 503 Land Application of Septage (KS)
- KDHE Floor Drains Guidance
- KDHE Geology and Well Technology
  - Water Wells Unit
    - Chlorination of Private Water Supply
  - Class V Wells
    - Class V Wells Forms and Guidance
    - Class V Well Plugging Report
- KDHE Municipal Programs
- KDHE Industrial Programs
- KDHE Bureau of Waste Management
- KDHE District Offices Directory
- KS Resource Guide (public health/env. health)
- KDA Floodplain Management
- KS Floodplain Map
- KDA—Division of Conservation (DOC)
- Kansas Geological Survey (KGS)
- Kansas Groundwater Association (KGWA)
- Kansas Small Flows Association (KSFA)
- Kansas Environmental Health Association (KEHA)

New Links

- Water Systems Council—Well Care Info Sheets
- EPA Land, Waste, and Cleanup
- EPA Private Water Wells
- EPA Onsite Wastewater Systems
- USGS Water Science School
- National Onsite Wastewater Recycling Association (NOWRA)

Kansas Department of Health and Environment

Resources: Lead in Drinking Water

Basic Information about Lead in Drinking Water (EPA Resource Site)

How Lead Gets into Drinking Water (EPA)

- Corrosion of service pipes containing lead
- Brass or chrome-plated brass faucets/fixtures with lead solder
- Where lead is present, and water is acidic/low mineral content (leading to corrosive conditions)

Tables providing guidance for testing drinking water from private wells (via EPA website, from Water Systems Council)

Other guidance offered by Water Systems Council (not formally reviewed by EPA)

- PPCPs and Drinking Water
- Water Well Inspection Checklist
- Information for Home Inspectors: Evaluating Water Wells

Lead in Drinking Water (July 2014)
Well Water Treatment Options and Costs (October 2009)

Contact KDHE LEPP:

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Class V Wells (Full Article)

Large Capacity Septic Systems
Brandy DeArmond, P.G., Chief, Kansas Department of Health and Environment Underground Injection Program

You had probably never heard of the Underground Injection Control (UIC) Program or Class V Injection Wells prior to beginning your position as a Local Environmental Protection Program (LEPP) County Sanitarian. Most people don't realize that in Kansas, wells such as an open-loop geothermal heat pump return well or a motor vehicle waste disposal well are considered Class V Injection Wells, and are therefore regulated by the Kansas Department of Health and Environment Bureau of Water's (KDHE BOW) UIC Program under the authority of the Safe Drinking Water Act (SDWA). This article will inform you about the most common type of Class V Injection Well you will encounter while you are in the field, the Large Capacity Septic System (LCSS). Then you will know why it is important they are regulated, what actions to take when you encounter one, what information to provide to the facility or homeowner, what information to provide to the KDHE UIC Program, and what happens to that information once it gets to KDHE. The KDHE UIC Program relies almost entirely on the County Sanitarian to ensure this type of Class V Injection Well is identified and tracked.

In general, Class V Injection Wells are shallow Injection Wells that inject fluids either into or above an underground source of drinking water (USDW). This method of disposal, coupled with little to no pretreatment, can easily threaten groundwater quality if not properly managed. Regardless of the type of Class V Injection Well, the owner and operator of the well are responsible for protecting the USDW from contamination.

The phrase "Injection Well" is somewhat misleading because it brings to mind a fluid under pressure being forced into the ground; however, the Environmental Protection Agency's (EPA) definition of injection is simply "the subsurface emplacement of fluids into a well". What qualifies as a well? Surely a septic system isn't an Injection Well? Actually, the Kansas Annotated Regulations (K.A.R.) 28-46-2a define a "well" as any of the following:

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So, a septic system, which is an on-site method of treating and disposing of sanitary wastewater, is considered a type of well. However, only LCSSs, not single-family home septic systems, are considered Class V Injection Wells. A septic system is considered an LCSS if it receives only sanitary waste from 1) multiple dwellings, or 2) a non-residential establishment with the capacity to serve 20 or more people per day, on any one day per year. According to the EPA, LCSSs may be found at "apartment buildings, trailer parks, schools and religious institutions, office, industrial and commercial buildings, shopping malls, state parks and campgrounds, recreational vehicle (RV) parks, highway rest areas, train and bus stations, hotels and restaurants, and casinos."

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(Continued on page 7)

Kansas Department of Health and Environment

Class V Wells

(Continued from page 6)

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If a LCSS is used to inject anything other than sanitary waste, it is no longer an LCSS. For example, if industrial waste or motor vehicle disposal waste are allowed to flow into an LCSS, the well would then be considered an Industrial Waste Water Disposal Well or a Motor Vehicle Waste Disposal Well, respectively. Chemicals disposed of from these types of facilities, such as volatile organic compounds (VOCs), heavy metals, and waste oil, can be toxic and may contaminate groundwater. As a result, these types of wells are prohibited in the State of Kansas. If you come across a septic system of any kind, even single family home septic systems, being used to dispose of industrial or motor vehicle waste, direct the owner/operator to cease the disposal of those fluids, complete and send in an Inventory Report, and we will determine next steps. Inventory Reports for these two types of Class V Injection Wells are also available at the link: http://www.kdheks.gov/uic/Class_5.htm

Although septic system regulations are specific to and enforced by individual counties within the State, the use of Class V Injection Wells must still be approved and inventoried by the BOW UIC Program through an Authorization.

The term "Authorization" is short for "Authorization by Rule", which allows an Injection Well to be operated without a Permit as long as the owners or operators:

- Submit inventory information to the KDHE UIC Program to verify that they are allowed to inject. This allows KDHE UIC personnel to ensure the well will not endanger a USDW;
- Operate the wells in a way that does not endanger USDWs; and
- Properly plug and abandon their Class V well when it is no longer being used, thereby preventing movement of any contaminated fluids into a USDW.

Kansas Department of Health and Environment

Submission of an Inventory Report for a Class V Injection Well to the KDHE UIC Program will allow staff to review the information and determination whether or not a USDW is being endangered. The information will be entered into the information into the KDHE BOW UIC Database and a hard copy of the Inventory Report will be filed.

Data from the KDHE BOW UIC Database is periodically provided to the EPA for tracking and funding purposes, and is a requirement of KDHE's primacy agreement with EPA, allowing the State to implement portions of the Federal UIC program.

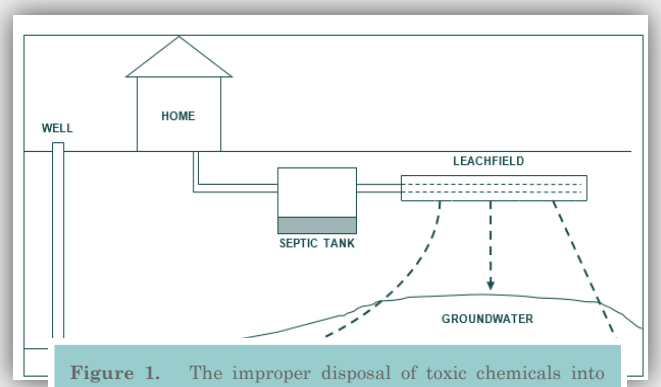

Figure 1. The improper disposal of toxic chemicals into septic tank leach field systems has been shown to contaminate groundwater, which could affect drinking water.

Additionally, the KDHE BOW UIC database is also used to populate all KDHE BOW UIC well locations and other limited information into the Kansas Environmental Interest Finder (https://maps.kdhe.state.ks.us/keif/), a mapping tool provided to the public by KDHE that allows a general view of potential environmental concerns within a particular geographic location, utilizing data from most KDHE Division of Environment programs. Here, by ensuring "UIC" is selected within the list of Environmental Interest Points, you can visualize not only the spatial location of the UIC Well, but also whether or not any potential environmental concerns are located nearby.

The various types Inventory Report Forms for UIC Class V wells are available on the KDHE UIC webpage at: http://www.kdheks.gov/uic/Class_5.htm. If you still have questions, please contact me at 785-296-5554, or brandy.dearmond@ks.gov and I will be happy to provide additional guidance and resources. In addition, the EPA provides a general overview about LCSSs on their website, located at https://www.epa.gov/uic/large-capacity-septic-systems.

Kansas Department of Health and Environment
Certified Laboratories Specializing in Testing Private Water Well Samples
June 2017

Lab #	Lab Location Address	Telephone/Mailing Address
E-10378	Meridian Analytical Laboratory	(316) 618-8787
	2626 South Rock Road, Suite 124	2626 South Rock Rd, Suite 124
	Wichita, KS 67210-1857	Wichita, KS 67210-1857
E-60633	Johnson County Environmental	(913) 715-6950
	Water Quality Laboratory	11811 South Sunset Dr, Suite 1700
	11811 South Sunset Dr, Suite 1700	Olathe, KS 66061-7058
	Olathe, KS 66061	
E-10110	Keystone Laboratories, Inc.	(913)-321-7856
	1140 W. Cambridge Circle Dr.	600 East 17th Street South
	Kansas City, KS 66103	Newton, IA 50208
E-10152	SDK Laboratories, Inc.	(620) 665-5661
	1000 Corey Rd	P.O. Box 886
	Hutchinson, KS 67501-0886	Hutchinson, KS 67504-0886
E-10150	Servi-Tech Laboratories, Inc.	(620) 227-7123 or (800) 557-7509
	1816 East Wyatt Earp Blvd	P.O. Box 1397
	Dodge City, KS 67801-7007	Dodge City, KS 67801-1397
E-10146 *	Pace Analytical Services – Salina *	785-827-1273 *
	525 N. 8th Street	525 N. 8th Street
	Salina, KS 67401	Salina, KS 67401

* Pace Analytical in Salina, KS, will analyze private well water samples if they are submitted through a business (e.g. water well contractor or real estate agency, etc.), or if the invoice for testing is at least $100.

These laboratories are certified to analyze for one or more of the following: total coliform bacteria, E. coli bacteria, nitrate, minerals, metals, volatile organic compounds. Be sure to ask the laboratory which analyses they are certified to perform. They should be helpful with providing the appropriate sample containers for the desired water quality test, and instructions for properly collecting, storing, and shipping the samples.

Additional information for chemical analyses performed by these and other Kansas certified laboratories can be found on the KDHE/Bureau of Water/Geology & Well Technology's Water Well Program website at: http://www.kdheks.gov/waterwell/index.html, under the heading **Water Well Testing**.

For questions concerning certification of laboratories in Kansas, please contact Sara Hoffman, Chief, Quality, Preparedness & Certification Section, Kansas Health and Environmental Laboratories, 785-291-3162 or sara.hoffman@ks.gov.

Some counties in Kansas are able to screen private water well samples for the presence/absence of bacteria, and/or provide screening level concentrations of nitrate and other inorganic compounds. Contact information for county sanitarians and local environmental protection program (LEPP) staff is also available on the Water Well Program website, at the link under the heading **LEPP County Sanitarians.**