

# Webinar on the Draft Graywater System Specification

1/8/14



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# Introductions & Housekeeping

- Introductions
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# Introductions & Housekeeping

- Mute Phone (\*6)
- Go To Meeting – Problems?
  - Email [Chendricks@kdheks.gov](mailto:Chendricks@kdheks.gov)
- Questions
  - “Chat” – Specify KDHE
    - Enter name to be called upon or
    - Type question
  - Informal – ask anytime during the Webinar and there will be periodic breaks to discuss submitted questions



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# Background

- HB 2321
  - Introduced 2013 legislative session by the Committee on Agriculture and Natural Resources.
- Key aspects of the bill included:
  - Allow for a Graywater Reuse System for irrigation and other agricultural purposes, commercial, industrial and domestic purposes.
  - The bill did not prevent graywater from being discharged to the surface of the ground.

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# Background Continued

| Source           | Gal/Cap/Day  | Percent      |
|------------------|--------------|--------------|
| Toilet           | 26.7         | 26.0         |
| Kitchen          | 7.0          | 7.0          |
| Laundry          | 21.6         | 22.0         |
| Bath/Shower/Sink | 23.3         | 23.0         |
| Leaks            | 13.7         | 14.0         |
| Other            | 1.1          | 8.0          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

\* Water Environment Research Foundation's Long-term Effects of Landscape Irrigation Using Household Graywater report (Roesner, et al., 2006)

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# Background Continued

- Intent of the Specification: balance the desire of Kansas constituents to conserve potable water while insuring the safety of public health and the environment.
- Intent of the Specification: clarify what type of system KDHE will approve a variance for (variance is required to KAR 28-5-2 through 7, pursuant to KSA 65-171d).
- This specification does not circumvent local code nor prohibit Local Authorities (LA) from either adopting or prohibiting this type of system within their jurisdictions.

# Graywater System Specification Overview

- Graywater is defined as wastewater from sources within single family residences, including showers, bathtubs, clothes-washing machines, hand-washing lavatories and sinks that are not used for disposal of hazardous or toxic ingredients.
- Any other source is prohibited.

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# Specification Overview

- Article I - General Specifications
  - Single-family residences with approved public or private onsite wastewater system (owws).
    - owws size may not be reduced.
  - May only be applied sub-surface via a drip irrigation system.
  - May not be applied to food-producing plants.
  - May not be applied when the ground is frozen or saturated.
  - May only be applied from March 1 – October 31.



# Specification Overview

- Article II – Plumbing Specifications

- Must have a diversion valve and an overflow pipe.
- Require all plumbing associated with the graywater system be labeled.

- Article III – Subsurface Drip Irrigation

- System shall be designed by a landscape architect, engineer or designer licensed by the LA.
- System installers shall meet any and all licensing, training, registration or certification requirements required by the LA.

# Specification Overview

- Article III cont.
  - Must have a filter that is designed and manufactured for wastewater and/or subsurface irrigation.
  - Separation distances are included in section 3.07.
  - Drip lines must be installed a minimum of 4 inches below the earth's surface but no more than 10 inches.

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# Specification Overview

- Article IV Tank and Pump Specifications
  - Graywater may not be stored in the tank for more than 24 hours.
  - Tanks must meet setback requirements in Bulletin 4-2.
  - Tanks must have an access opening and be child and tamper resistant.

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# Specification Overview

- Article V – Variance Requirements and Enforcement
  - Counties/Municipalities with codes *as stringent as State Law*:
    - Homeowner submits an application for a Variance to install a Graywater Reuse System to the LA.
    - LA reviews under authority of local code and for compliance with the Specification.
    - If the application is compliant, the LA may submit a request for the Variance to KAR 28-5-2 through 7 to KDHE.

# Specification Overview

- KDHE will review and grant the variance to the LA. Any permitting requirements or fee's as established in the local code will still be abided by.
- If the application is not compliant with the Specification, the homeowner may revise it and resubmit to the LA. Or the homeowner may submit the variance request directly to KDHE for consideration. In such cases, KDHE will consult with the LA to understand the LA's position but ultimate approval or denial of the variance request is under the authority of KDHE.

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# Specification Overview

- Homeowners residing in jurisdictions *without* a sanitary code must submit the variance request directly to KDHE.
- Homeowners residing in jurisdictions *with a code that includes provisions on Graywater* should submit the variance request to both the LA and KDHE.
- Any changes to the design or installation of the system either during or after construction requires a new variance.
  - Inspections (real estate included) may be required as they pertain to local code.

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# Specification Overview

- Article VI – Best Practices
  - List of recommendations to help insure a properly functioning system
- Article VII – Effective Date (TBD)
- Article VIII – Variance Procedure Flow Chart
- Article IX – Definitions

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# Specification Survey Results

- Comments and Questions

- Cost prohibitive
- Will KDHE develop an approved graywater tank/installer list?
- Graywater will ultimately result in a higher concentration of blackwater. How does this effect the microbial activity in an OWWS?

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# Specification Survey Results

- How will homeowners handle water remaining in the graywater tank?
- The system should have a backflow valve between the septic tank and the graywater tank
- Will water softener discharge be considered Graywater?
- What is a Special Variance?
- What other states have Graywater Reuse System guidance or regulations?



# Graywater System Specification

- Next steps

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# Questions



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