

## Water Reuse in Kansas: What About Health?

Decision-making often requires balancing multiple priorities, such as the availability of funding and workforce and existing regulations. In many cases, decisions made in various sectors, including energy, transportation or natural resources, can affect a community's physical environment, quality of life and health. Routinely considering health implications in decision-making can ensure that decisions do not negatively impact health. Health impact assessments (HIAs) are one tool to identify health considerations in policymaking for sectors not directly associated with health. On October 19, the Kansas Health Institute convened water experts to discuss how HIAs can be used to inform environmental and natural resource decision-making.

To demonstrate how this tool can be applied locally, KHI shared findings and recommendations of a newly released HIA, [Potential Health Effects of Municipal Water Reuse in Kansas](#). Although many water-related decisions already consider public health and safety, the HIA examined health effects more broadly—beyond the prevention of acute infection from water-borne pathogens—and included what are known as the social determinants of health. The findings, presented by Carlie Houchen, KHI analyst, suggest that water reuse could impact community health by affecting the following issues: water availability as it contributes to community sustainability, community perception of water quality, actual water quality, consumption of beverages other than municipal tap water, costs and utility rates, and guidance and regulations.

*“Before the Water Reuse HIA, one might not have recognized potential connections between water reuse and mental health, stress, obesity and other health issues. An HIA allows a more structured approach to making decisions and a better dialogue about the tradeoffs.”*

– HIA Team  
Kansas Health Institute



For example, if a community is not engaged in a decision to reuse water, there could be a decrease in the community's perception of the quality of water after reuse begins. This could lead to an increase in consumption of soda or other sugary drinks. A switch from water to soda or sugary beverages can increase the risk of type 2 diabetes, heart disease and other chronic conditions.

## Health Impact Assessment: A New Approach for Environmental Health

Keynote speaker Florence Fulk, Ph.D., formerly of the Environmental Protection Agency (EPA), shared a national perspective on the ways in which HIAs have been used to inform environmental decisions.

- An HIA was used to inform an update to sanitary codes in Suffolk Co., New York, and helped to balance the residents' desire for independent decision-making with the need for safe sewage disposal systems.
- Persistent flooding and impaired water quality was the subject of the Proctor Creek HIA, which raised awareness about the value of green infrastructure and re-established productive communication between affected communities and the City of Atlanta, Georgia.
- The Kingsbury Bay (Duluth, Minnesota) HIA included strategies for improving health during the construction phase of habitat remediation work.

In these case studies, an HIA identified previously unrecognized health impacts (e.g., stress, injury) related to green infrastructure, sanitary code for onsite sewage disposal systems and habitat remediation and restoration.

## Panel Discussion: Experiences of Kansas Communities

A group of Kansas experts participated in a panel discussion with Ms. Fulk: Toby Dougherty, city manager of Hays; Fred Jones, water resource manager of Garden City; and Jake White, water and wastewater treatment engineer with Burns & McDonnell. The panel was moderated by Sarah Green, project manager for the Kansas Health Foundation's Water Initiative. The panelists spoke about solving problems in a way that benefits communities for generations. Panelists said that water reuse was something to think about now—so that communities don't find themselves in a position where they must react quickly on water reuse under duress (such as a drought situation). Major themes of the panel discussion included drivers for reuse, community perception of reuse and the need for a regulatory framework for reuse in Kansas.

***"I just don't think we develop the best policies when we're under crisis."***

*– Fred Jones,  
Water Resource Manager, Garden City*

### Drivers for Reuse

When discussing their experience with reuse, some panelists noted that water reuse stemmed from community interest in having access to green spaces, sports fields and golf courses. Due to the relative water scarcity in parts of the state, such as Hays, water reuse became a reliable option for maintaining the desired quality of life. Furthermore, thinking about water reuse as an important part of an overall sustainable water plan is increasing across the state.

### Community Perception

A point of emphasis was the importance of communicating effectively with the public and other stakeholders about water reuse—taking into account the local circumstances. For example, communities that are worried about water supply due to droughts are more likely to attend public meetings. As Jake White of Burns & McDonnell noted, it is usually easier to engage communities "when the conversation turns from 'we want to use the effluent to water ball fields' to 'we are the

community that may be out of water...'" The panelists also acknowledged that it is equally important to identify opportunities for community engagement "when there is no wolf at the door." According to Ms. Fulk, one option is to work with communities on creating a shared value around water. This could be done by ensuring that "communication about water is accurate, timely and honest."

### Regulations

Panelists agreed that the HIA recommendation to create the regulatory framework for water reuse is important for successful long-term water resource planning in Kansas. The panelists highlighted that communities experience difficulties with developing reuse plans or projects in a system where determinations about reuse are made on a case-by-case basis. To address this issue and receive approval of water reuse permits, some localities look at states that have the strictest regulations and adopt them for their projects.

***"There is a comfort level with having a framework of regulations. Cities don't have a problem working in the areas where there are zero regulations. However, when something is quasi-regulated or could be regulated down the pike, that's when cities can get reluctant to do something. Water reuse is a perfect example of that."***

*– Toby Dougherty,  
City Manager, Hays*

### Looking Ahead

Attendees expressed interest in exploring how to integrate broader health considerations in their decisions; having future discussions about the presence of pharmaceuticals and other contaminants of emerging concern in agricultural runoff; considering the potential role of reuse in recharging Kansas' depleting aquifer; and exploring types of reuse beyond municipal, such as industrial reuse and the reuse of water from fracking operations.

#### KANSAS HEALTH INSTITUTE

The Kansas Health Institute delivers credible information and research enabling policy leaders to make informed health policy decisions that enhance their effectiveness as champions for a healthier Kansas. The Kansas Health Institute is a nonprofit, nonpartisan health policy and research organization based in Topeka that was established in 1995 with a multiyear grant from the Kansas Health Foundation.

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 212 SW 8<sup>th</sup> Avenue | Suite 300  
Topeka, Kansas | 66603-3936

 785.233.5443

 khi.org

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