

Community concern or issue: *Limited Water Supply* for Salina residents, industries, and irrigated farm practices

How does this issue impact citizen health or the environment?

About 97 percent of all water on the Earth is in the oceans and only three percent of all Earth's water is fresh water—and the majority of that is locked up in glaciers and icecaps. Most of the water humans use in everyday life comes from rivers, which is about 0.0067 percent of all the Earth's water. Water is one of our most critical raw materials — even more important than oil, for there are no alternatives to clean, usable fresh water. Community health and economic development is dependent on adequate supplies of clean water. As usable supplies of water are reduced, competition for water will become greater, water cost will increase and allotments will decrease, and water quality regulations will tighten. As fresh water quantity diminishes, wildlife populations will be greatly impacted on a worldwide basis.

Existing controls or standards

There are no standards to guide water usage—for residents or for industry. With plentiful and cheap water supplies, people waste water. Salinans use an average of 124 gal/person/day. Yet other cities, such as Hays, have decreased their water usage to only 89 gal/person/day. People in water-impooverished societies often have access to less than five gal/person/day.

How is this issue impacting Salina?

All of Salina's municipal water comes from the Smoky Hill River and from wells near the river. Water levels in city wells dropped 10 feet from 1996 to 2006 (although levels have risen some since then as the river got back some of its flow). River flow rates are lower now than during the 1930s dust bowl. Kanopolis Reservoir is gradually filling with silt, which decreases its storage capacity, which means less water is released into the river channel during

droughts when reservoir levels are low. The city of Salina declared a water emergency in 2006 when the river nearly ran dry. Groundwater levels drop as river levels drop. Groundwater contamination plumes move closer to city water supply wells when well levels fall. If contaminant plumes reach city wells, the wells may become unusable for drinking water, reducing Salina's usable water supplies even more.

What factors and behaviors contribute to this problem?

Our habits of water use come from a history of assuming that water sources are unlimited. These patterns – wasteful and careless use of water – cannot be sustained in climates where water is more limited.

Potential solutions – how can the community help with this issue?

Salina is located in a semi-arid region. Scientific models predict that the Central Plains region will become hotter and drier in coming years. The community can preserve its water supply by reducing water use. The following approaches can be used to achieve that reduction: provide water conservation education; promote use of low-flow shower heads, faucets, toilets, washing machines, and other products; provide water audits to detect water leaks and recommend water-saving (and cost-saving) measures; amend city codes to require water-conserving fixtures and appliances in new/remodeled homes; impose penalties for wasting water; sponsor a community challenge or competition to save water; promote use of native plants and grasses that require less water and are better adapted to our local climate; encourage highly efficient irrigation or dry-land farming.

NOTE: This fact sheet was taken from an issue paper developed by Ann Zimmerman, Ken Barnard, and Doug Rudick.

The detailed fact sheet can be accessed at www.sbeap.org/CARE