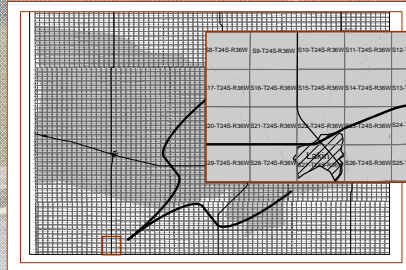


Utilizing GIS Mapping Strategies to Assist Local Watershed Organizations Visualize Watershed Conditions More Effectively

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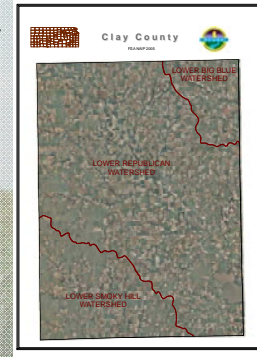
All landowners and residents of the watershed are invited and encouraged to join the SLT. In order to contact them, a map is created using Public Land Survey System (PLSS) Section, township and range are plotted on the watershed map. This data can then be cross-referenced with County offices to acquire addresses of residents.



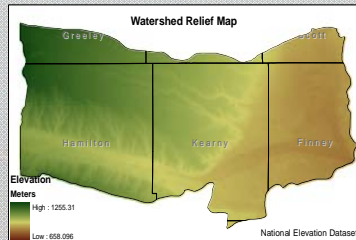
Abstract

Kansas State Research and Extension has been working since 2003 with Stakeholder Leadership Teams (SLTs) across the State of Kansas to assist in improving or protecting their water quality. This goal is obtained through participation in Watershed Restoration and Protection Strategies (WRAPS) where SLTs determine how they want to apply Best Management Practices (BMPs) and distribute educational information specific to the conditions in their watershed. As part of this process, GIS (Geographic Information Systems) maps have been incorporated into the WRAPS learning process to assist stakeholders visualize their watersheds.

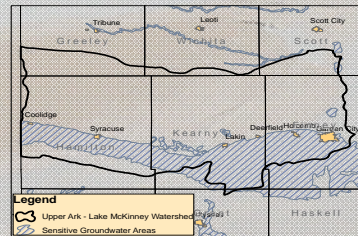
At the introductory meeting of the SLT, attendees are asked to observe an aerial photographic poster and pinpoint their home, place of business or school and town. They discover which watershed they live in and what potential places of pollutant origin might be in their watershed. This practice develops a sense of living within a watershed instead of living in a political boundary.



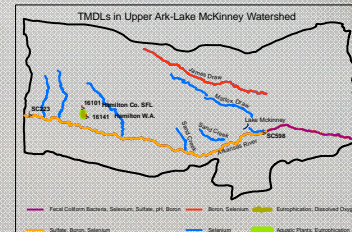
Various maps can be used for visualization of a watershed. Below are examples of maps that were designed for the Upper Ark – Lake McKinney Watershed in western Kansas. These maps were used as learning tools with the SLT to describe the watershed. Elevation and landcover were utilized to visualize the layout of the watershed and explore the interrelationship between land activities and water quality. Another tool was the connection and interaction between surface water and ground water. Aquifer supply is a concern in western Kansas, therefore, maps of groundwater supply and sensitive groundwater areas were assembled. TMDLs were mapped along with monitoring sites, public water supplies and possible sources of pollutants so that the SLT can envision point and nonpoint causes of pollution and discover how actions on the land affect water quality.



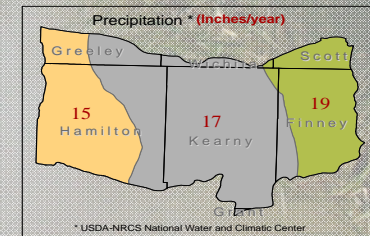
Elevation



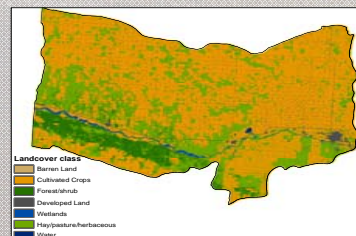
Sensitive Groundwater Areas



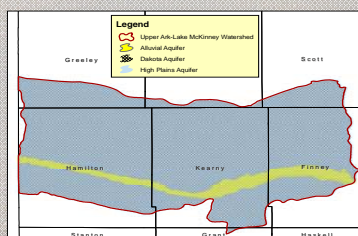
TMDLs



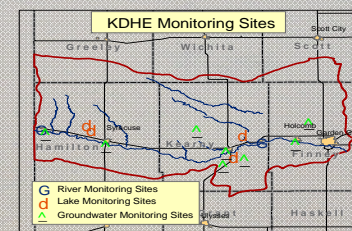
Precipitation



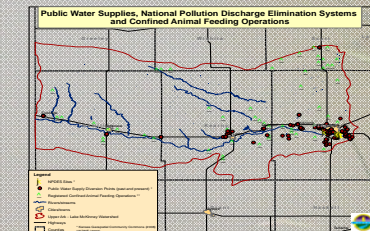
Landcover



Aquifers



Monitoring Sites



Water Supplies and Possible Sources of Pollutants