



2009 CSREES National Water Conference; St. Louis, MO

**Perceptions and Realities of Watershed Health in the Lower Kaskaskia River:
An Integrated Approach**

Elliot E. Brinkman*, Julia Friedmann, Erin Seekamp, Jon Schoonover, Mae Davenport, and Karl Williard
Southern Illinois University Carbondale
* elliot.brinkman@gmail.com

Abstract:

Water quality is a persistent issue in Midwestern rural and urban communities; to be able to address these issues appropriately, a community's capacity must be assessed. Previous research has focused predominately on water quality and potential management strategies; however, research often fails to address the particular community's ability to implement them. Perceptions of community leaders and citizens often drive the allocation of resources and efforts to apply management strategies in order to improve water quality. The objectives of this study are to examine how community leaders' and citizens' perceptions relate to actual water quality data collected for the area and determine if there are differences in perceptions between community leaders and citizens. The study location is in a rural area in the Richland Creek Watershed, east of St. Louis. Within the study community, the majority of perceptions of water quality health contrast with actual water quality data collected. Qualitative data was gathered through the analysis of interviews and focus groups conducted with community leaders and citizens to assess perceptions of watershed health. Interviews and focus groups with community leaders and citizens revealed that perceptions of watershed health were fair to good; however preliminary water quality data indicated that water quality is a concern within the watersheds. Water samples consistently have elevated levels of *E. coli* (1216 ± 273 MPN) and orthophosphate (2.60 ± 0.37 mg L⁻¹). High *E. coli* levels pose a threat to human health and high orthophosphate levels can increase the risk of biological impairments. Data collected from interviews and focus groups suggest that perceptions between community leaders and citizens were similar. There is a need to inform community members about the reality of the watershed conditions to effectively manage for a healthy watershed.

Impact Statement:

The Watershed Health Integrated Research project will provide an assessment of overall water quality for eight sub-watersheds in the Lower Kaskaskia River of southwestern Illinois, while assessing the surrounding communities' capacity to address water quality impairments. This project will potentially contribute to better overall awareness of community and water quality health among stakeholders. Better perceptions may then lead to more community involvement in regards to water quality issues and improved social cohesion could initiate partnerships necessary for the improvement of local water quality and community health. Community involvement will foster partnerships between citizens and leaders to address water quality issues. These partnerships, along with agencies and NGO's, will be essential in acquiring institutional support from outside of the community. These partnerships will also be helpful in leveraging financial and personnel resources to better address water quality issues. From this project, we've learned that perceptions of water quality among diverse stakeholders vary greatly, and that community perceptions often differ from actual conditions.

Category: Human Dimensions

Type of Presentation: Poster Presentation