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KOHN
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Utilizing Place Based Education & Research to Assess the Environment of Iowa, from Lakes to Karst

Conducting place-based research at a small liberal arts university is not only possible but can offer critical support to students (i.e. place based learning) and the community (management decisions). The BVU campus is located on the shores of **Storm Lake**, providing ample research opportunities. Over the years, the waters of Storm Lake and of the watershed have been and continue to be assessed, allowing students to gain knowledge on **water quality issues** and take ownership of content. The first portion of this presentation will highlight some of the findings from the ongoing water quality research. In short, data indicate that creeks flowing into Storm Lake have elevated nitrate as nitrogen concentrations and at times elevated sediment loads, the latter being caused by **precipitation events**. The lake also has elevated and increasing chloride concentrations. Data from research projects have used by City of Storm Lake to help guide ongoing **stormwater** projects to improve the lake's water quality and the city's flood management plan.

The second portion will focus on another example of research that can be completed at a small liberal arts university, **remote sensing** of agriculture and karst. Agriculture in the Midwest is an important component of the economy. **Karst landscapes** in the Midwest can be locally common and complicate agricultural activities. Complications include thin and rocky soil, nutrient and fertilizer management concerns, and effects to groundwater resources. Best Management Practices for agricultural activities have historically been written for surface water concerns, with minimal consideration for the interconnection between **surface and groundwater** in karst areas. Presented here will be a description of concerns associated with higher livestock concentrations in karst landscapes and present approaches and regulations to minimize agriculture's environmental impacts in karstic areas that will aid in protecting groundwater and soil resources.



**FRIDAY,
NOVEMBER 22
3:30-4:30PM**

219 JESSUP HALL