St. Olaf Natural Lands

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Materials and Methods

We used the same boundary in all the calculations of total area (as outlined in magenta on the map).

Our first objective was to determine the number of landowners on present day St. Olaf property. We utilized plat maps obtained from the Northfield Public Library. We used maps of Bridgewater Township in Rice County from the years 1938, 1950, 1954, 1987, 1991, 1997 and 2000. We counted the number of landowners each year and estimated total percent of non-St. Olaf land.

Our second objective was to compare land use within a 625-acre area on St. Olaf campus. Using electronic aerial photos obtained from DNR sources from the years 1938, 1984 and 1991 we determined the percent area of land dedicated to each land type. We differentiated the areas on a basis of shade, line shape, and visual texture.

We loaded these pictures into devFlow 5.1 and manipulated the photos to obtain area information. We overlaid the photos onto a DOQ taken in 1991 that was georeferenced to DOQ UTM Zone 15 NAD 83 coordinates. Using separate polygon themes, we traced the boundaries of each land type. These areas were added together to provide the total area of each land type, and outlined on the photos for visual reference. The campus proper and other land that did not fall under these categories was labeled as "Other."

We used a Trimble GPS unit to collect coordinates of the present natural lands. We are interested in the history of the natural lands on what is present day St. Olaf property. There have been many changes in land use throughout the years. We focused on woodland, prairie, agriculture and wetland cover, as well as ownership of present day St. Olaf land.

We had three main objectives:

• To document trends in land use
• To research changes in land ownership around St Olaf campus
• To investigate map making procedure

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