

Effects of Urbanization on Water Resources in Johnson County, KS  
Project Update

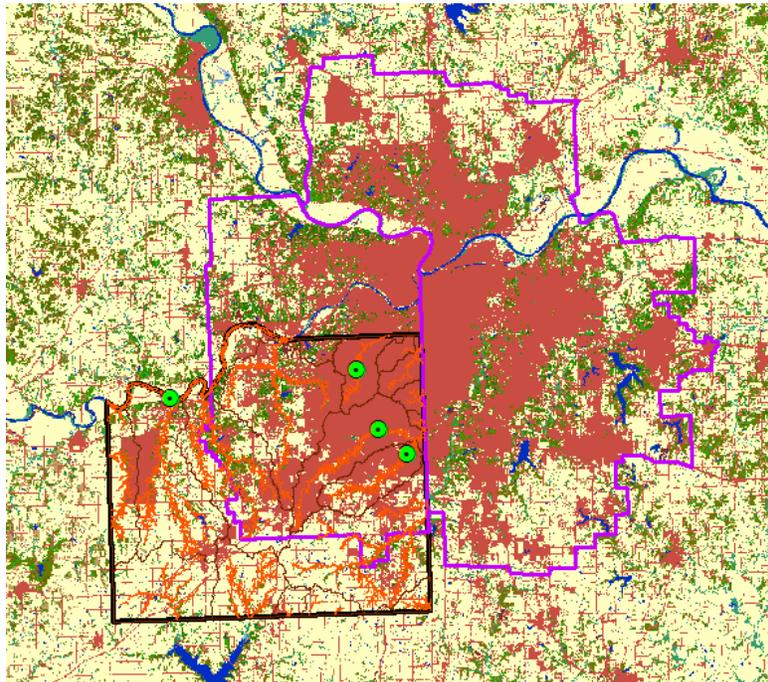
CE 394.K  
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**Data:**

I have collected a shape file for the Johnson County, the watersheds in the Johnson County, and the streamlines. The county line, watershed boundaries, and streamlines were all collected from the Johnson County Automated Information Mapping System website. I also added the NHDPlus streamlines to check the ones I had downloaded. The NHDPlus data was loaded from the GIS Landscape2 server. I was also able to find the current land cover data using the USA\_Landcover\_GAP data set on the GIS Landscape3 server. The Mid-American Regional Council (MARC) website provided a shape file for the area of the Kansas City metro that is considered urbanized. The USGS website was used to find the relevant stream gage locations for Johnson County. The locations were put into a csv spreadsheet and loaded on the map. For the gages USGS has peak flow data from the 1960's to the 2010's.

**Map:**

Below is a depiction of what the map currently looks like. The Black outline is the County Shapefile. The Purple outline is the area of the Kansas City metro that is considered to be urbanized by MARC. The Neon green dots are the stream gage locations. The land cover data shows that areas that are the rust color have less pervious land cover than the areas that are more yellow, and green. The water shed boundaries are a thin black line, most easily seen in the upper right hand corner of Johnson County.



Challenges/To do:

- The main challenge will be finding landcover data to represent the landcover before 1990.
- When the landcover data is found I would like to turn that into an automation
- The next thing that needs to be done is loading the gage data for the relevant gages in Johnson County.
- I would like to turn the gage data into an automation.
- The final step will be interpreting the information and drawing conclusions about the effects that urbanization have had on the Water Resources in Johnson County.