



James River Water Area Change From 1953 to 2003

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Location: Lake Springfield Dam;
Springfield, MO

Introduction:

- Study of the James River at the Lake Springfield Dam
- Impact of the Dam on the amount of water and change in surrounding area due to human involvement
- See how the one hundred year flood will now effect the area around the lake.

Introduction: Goals

- To see how the landscape changed by the building of the Lake Springfield Dam
- If there is an increase or decrease in vegetation and human development
- How much impact the water could have on surrounding development
- What a 100 year flood could possibly impact

Introduction: Previous Work

- No identical studies of the lake impacts
- Studies on water quality
- Impacts of the dam down river
- Recreation use around and on the lake

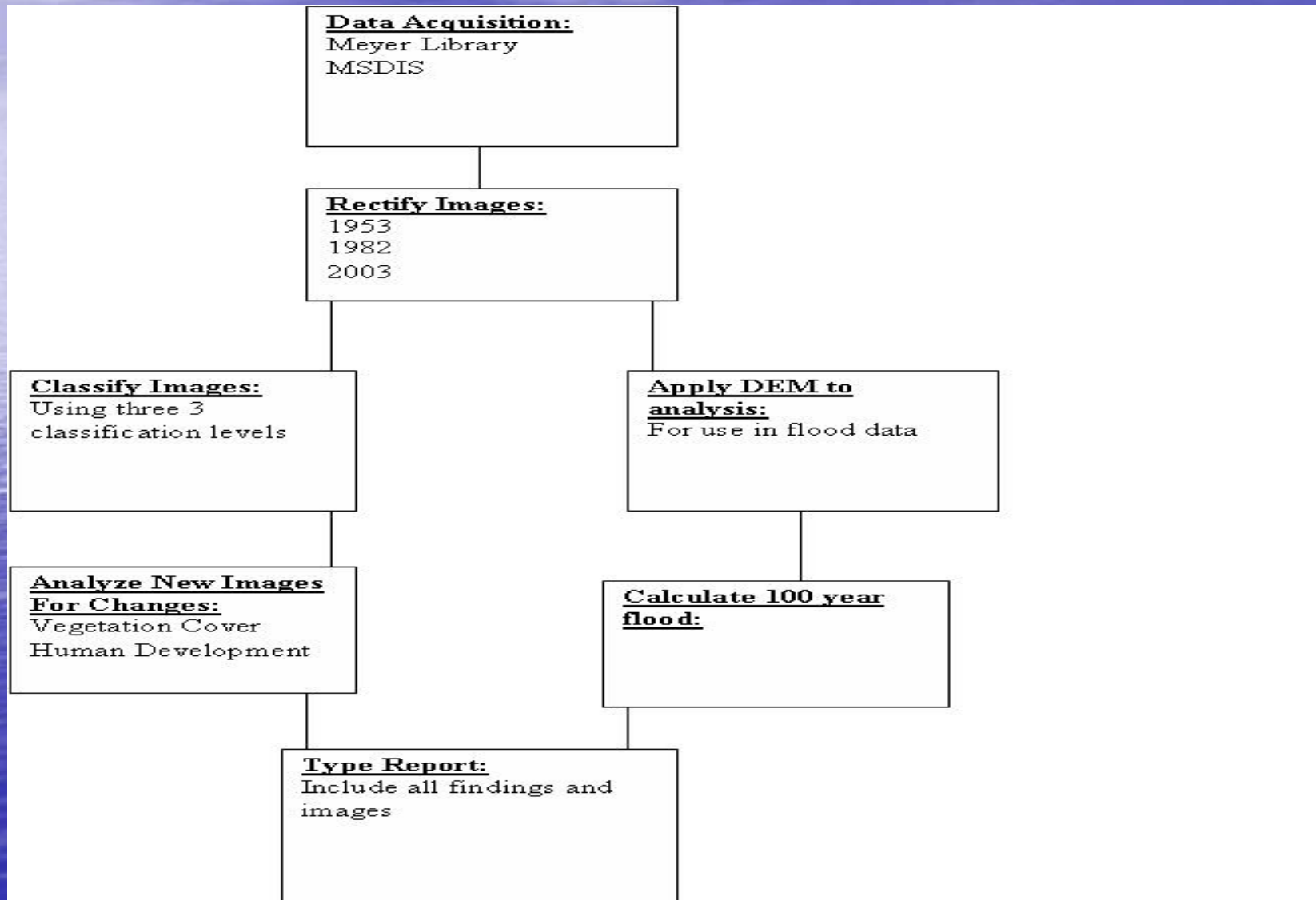
Introduction: The Study Area

- The James River just south of the City of Springfield, MO
- Three dates of study; 1953, 1983, 2003
- Interested in the river and area around the lake itself

Methods: Data

- Air photos from the Meyer Library flown over Greene County taken in 1953, and 1983
- Ortho Images from 2003 from the MSDIS web site
- DEM model also from the MISDIS web site

Methods: Flowchart



1953



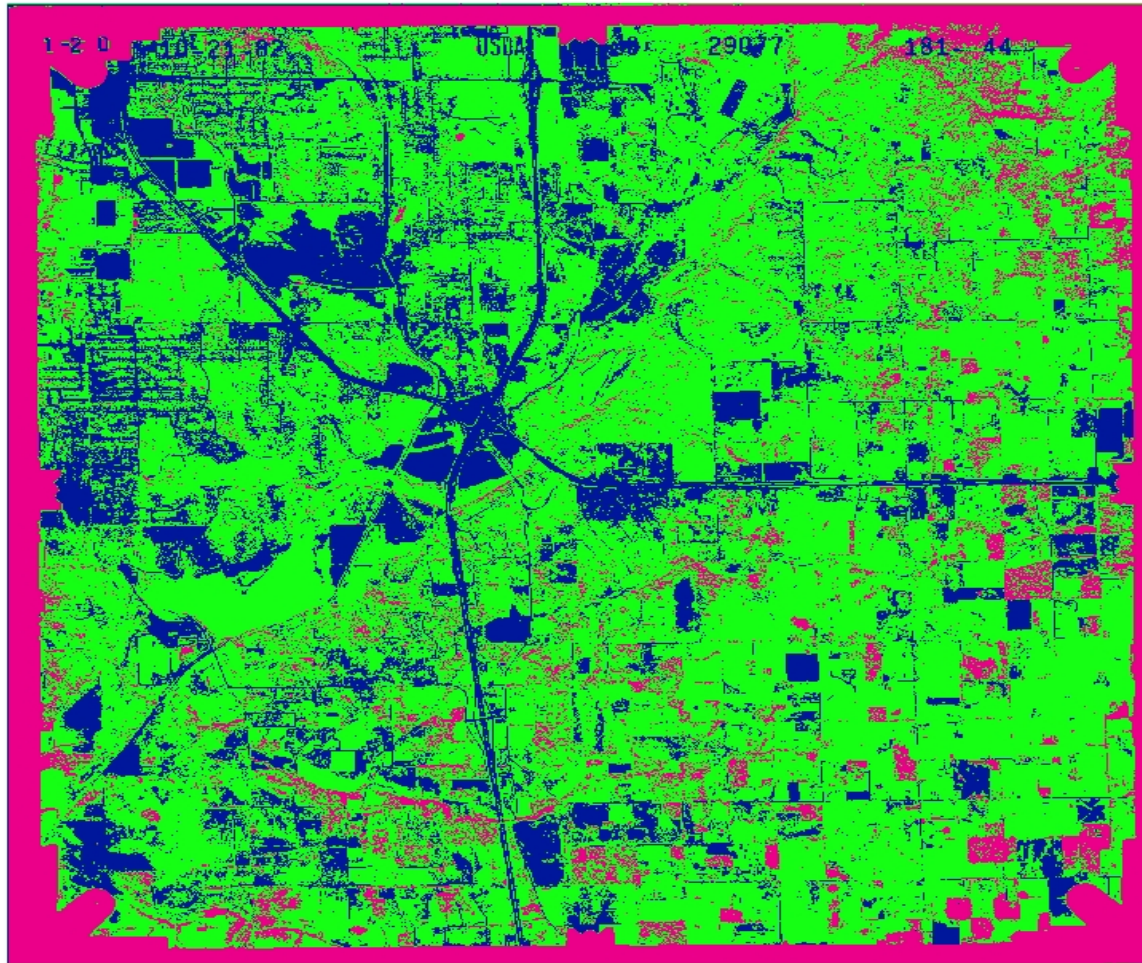
1983



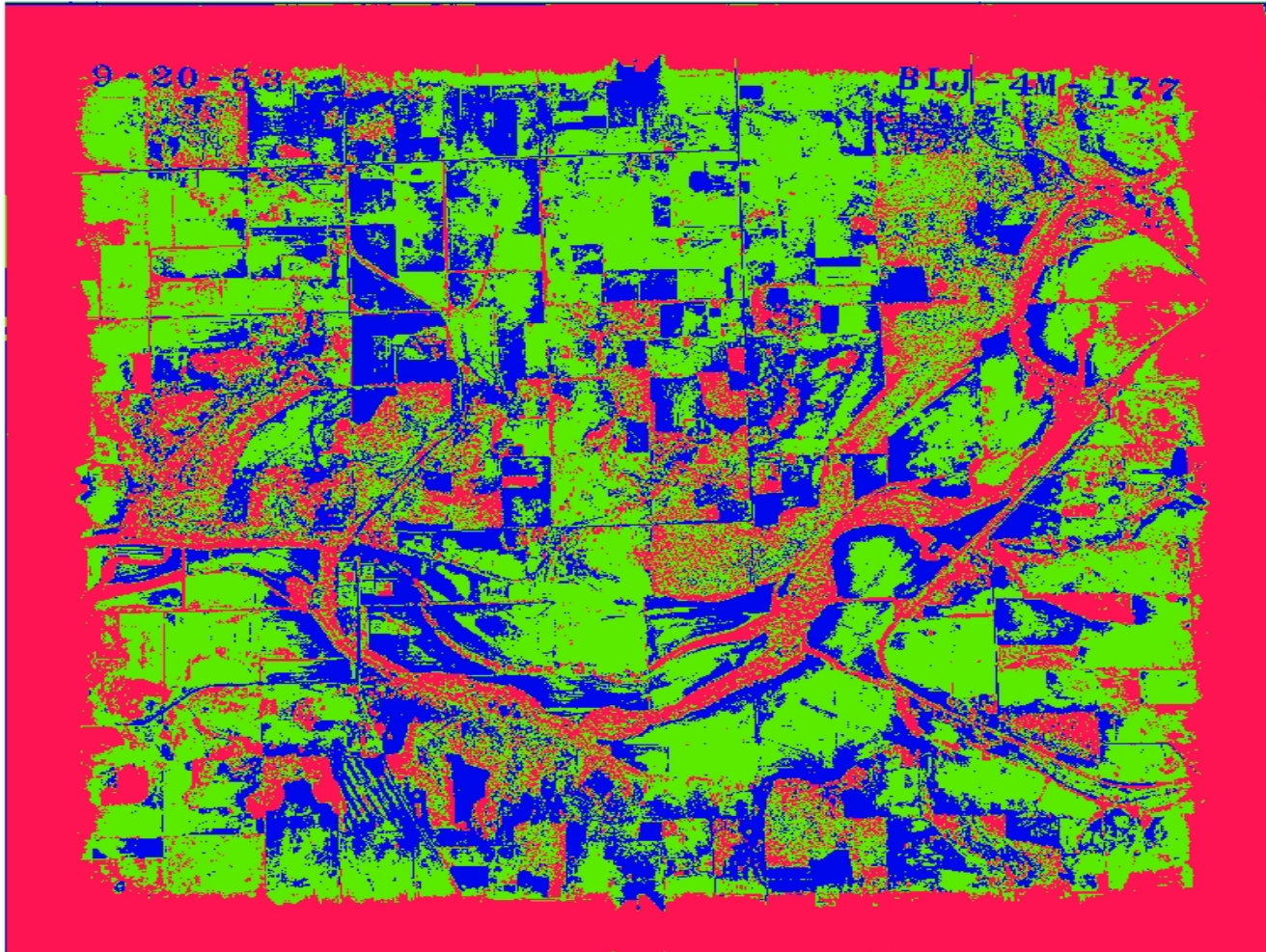
2003



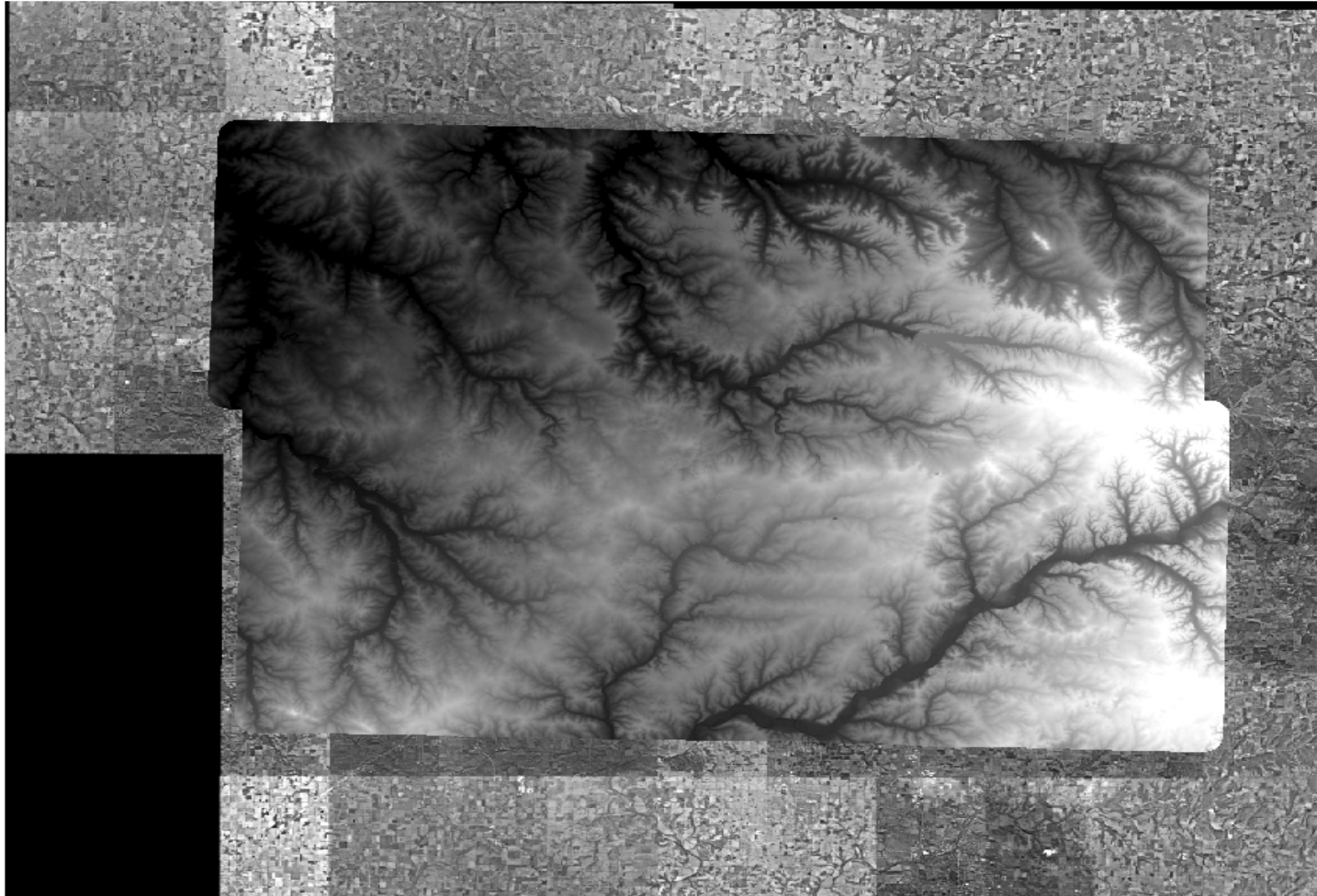
1953 Classified



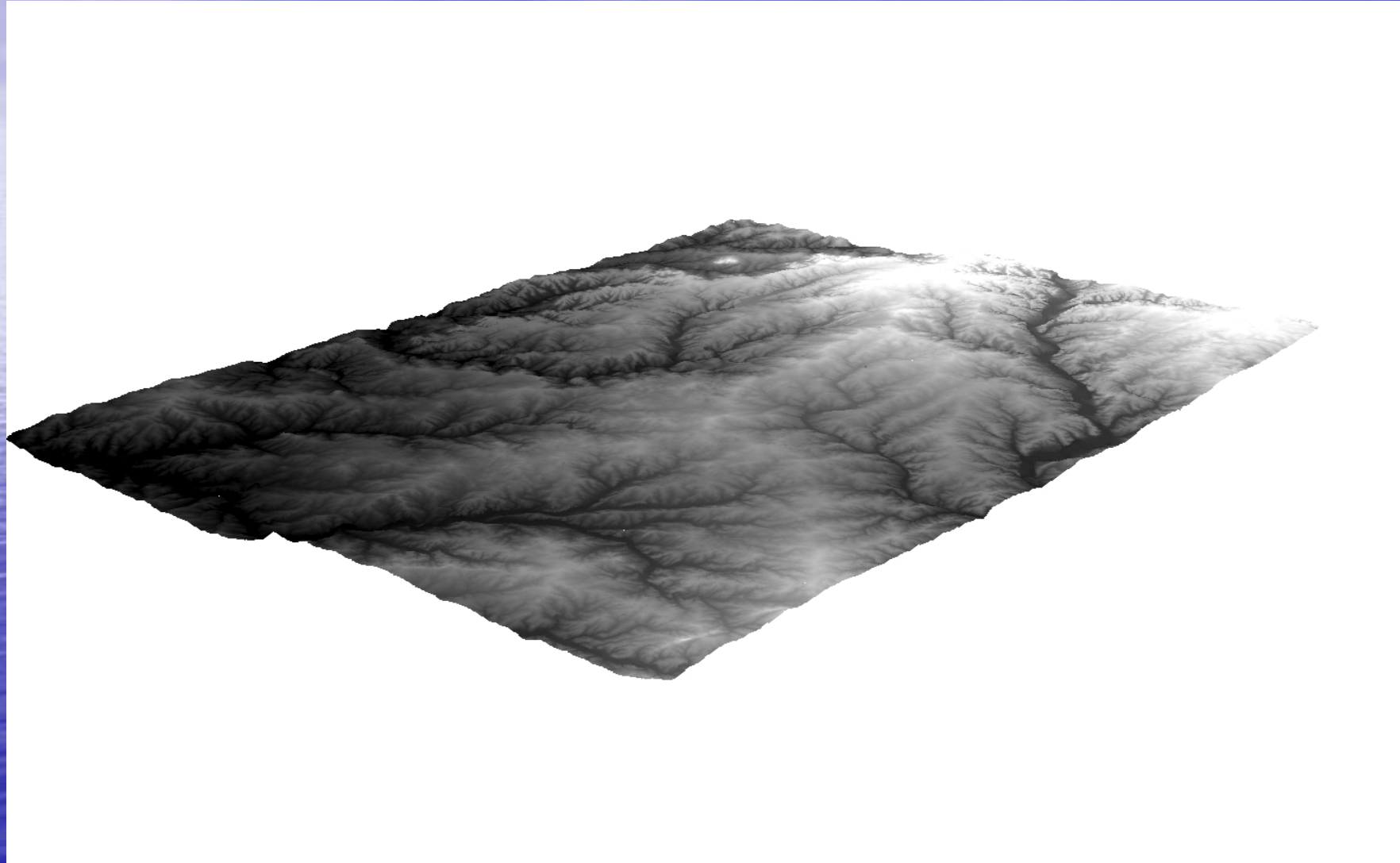
1982 Classified



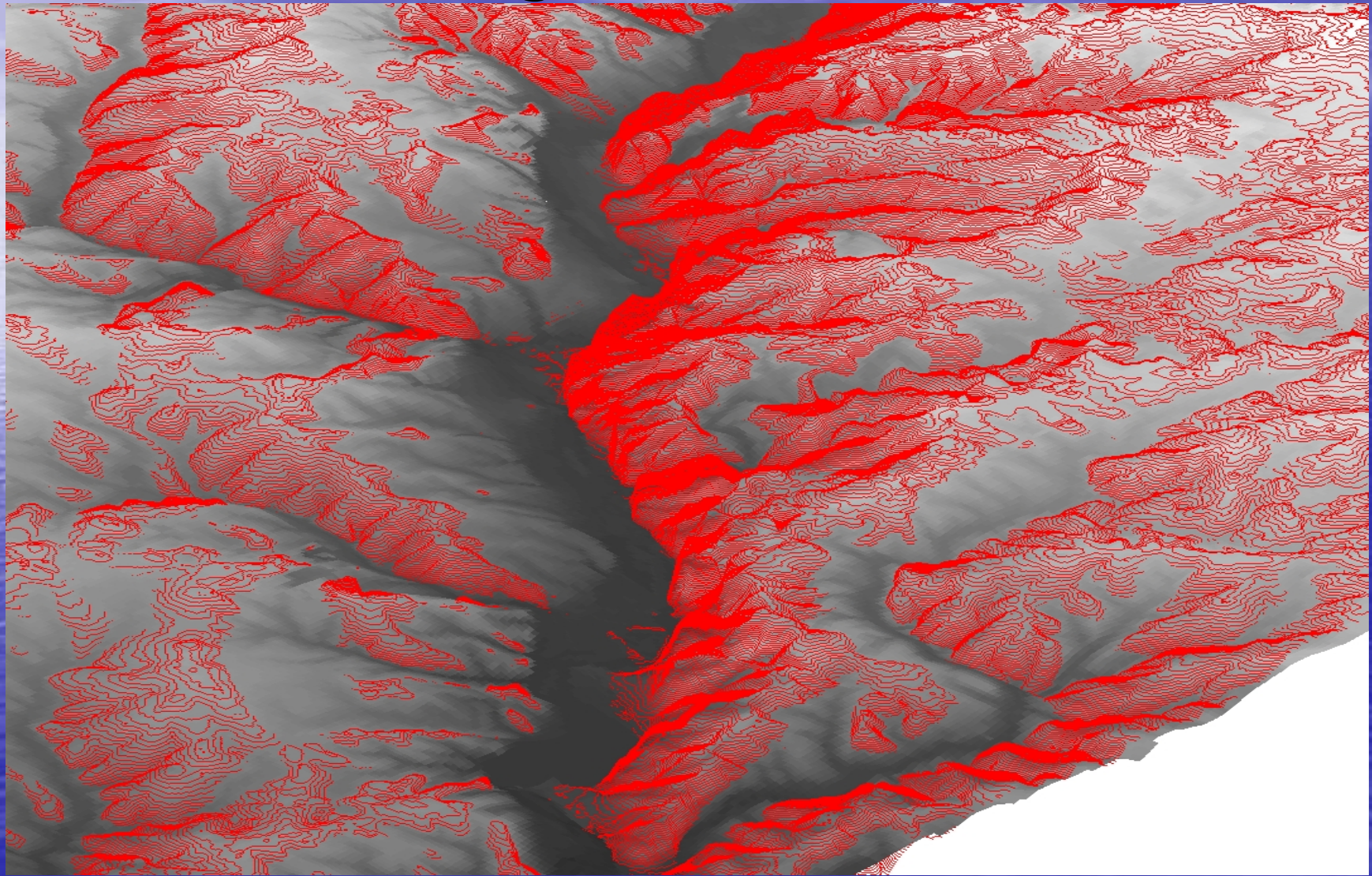
DEM with image



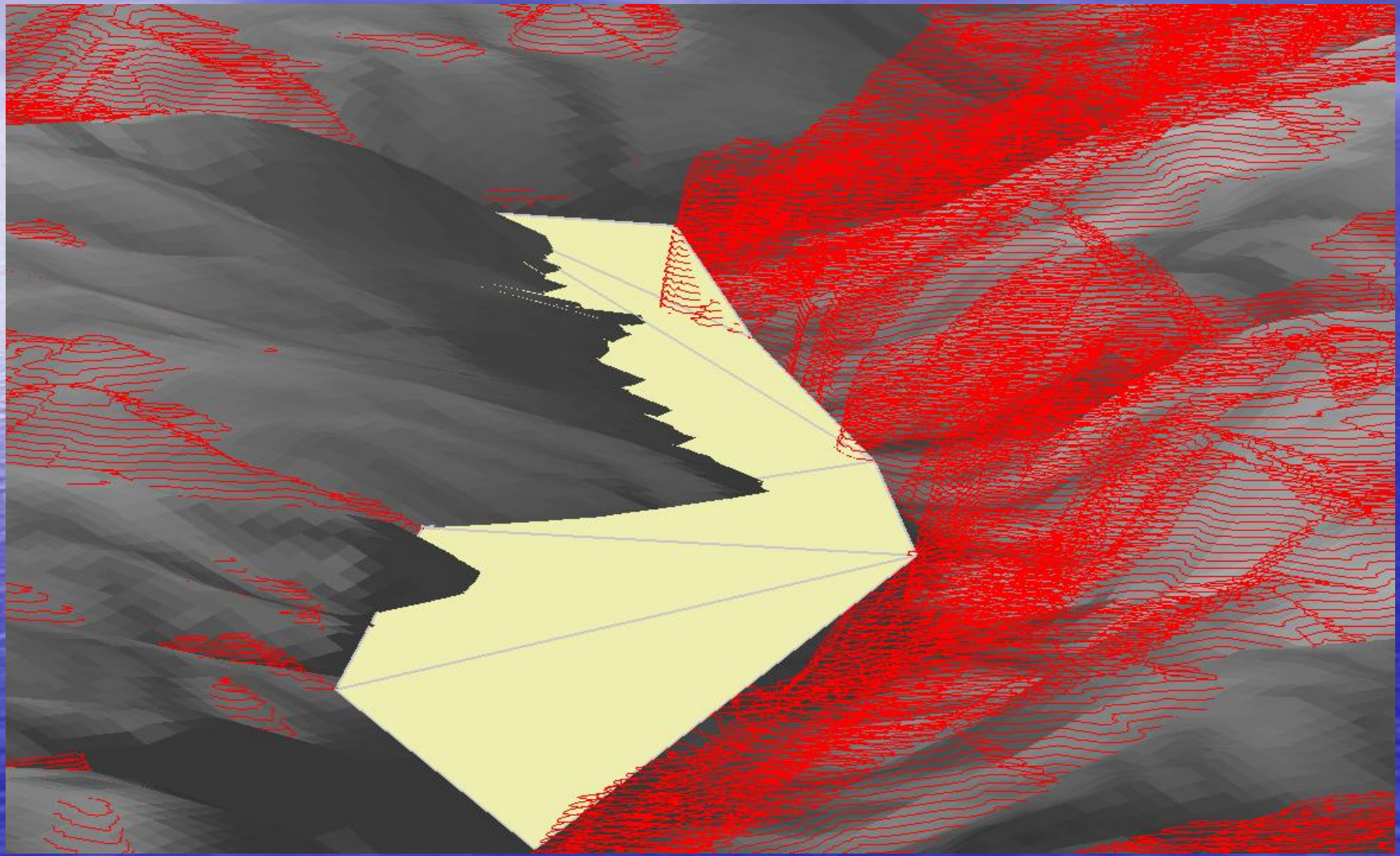
3D DEM



Contour Heights



Flood Area



Conclusion

- Increased vegetation cover?
- Development outside flood zone
- Given more time...
- Application to other projects