

Quantitative Estimation Of Land Use Land Cover Evolution Across The Middle Tennessee Elk Region Over The Past Four Decades

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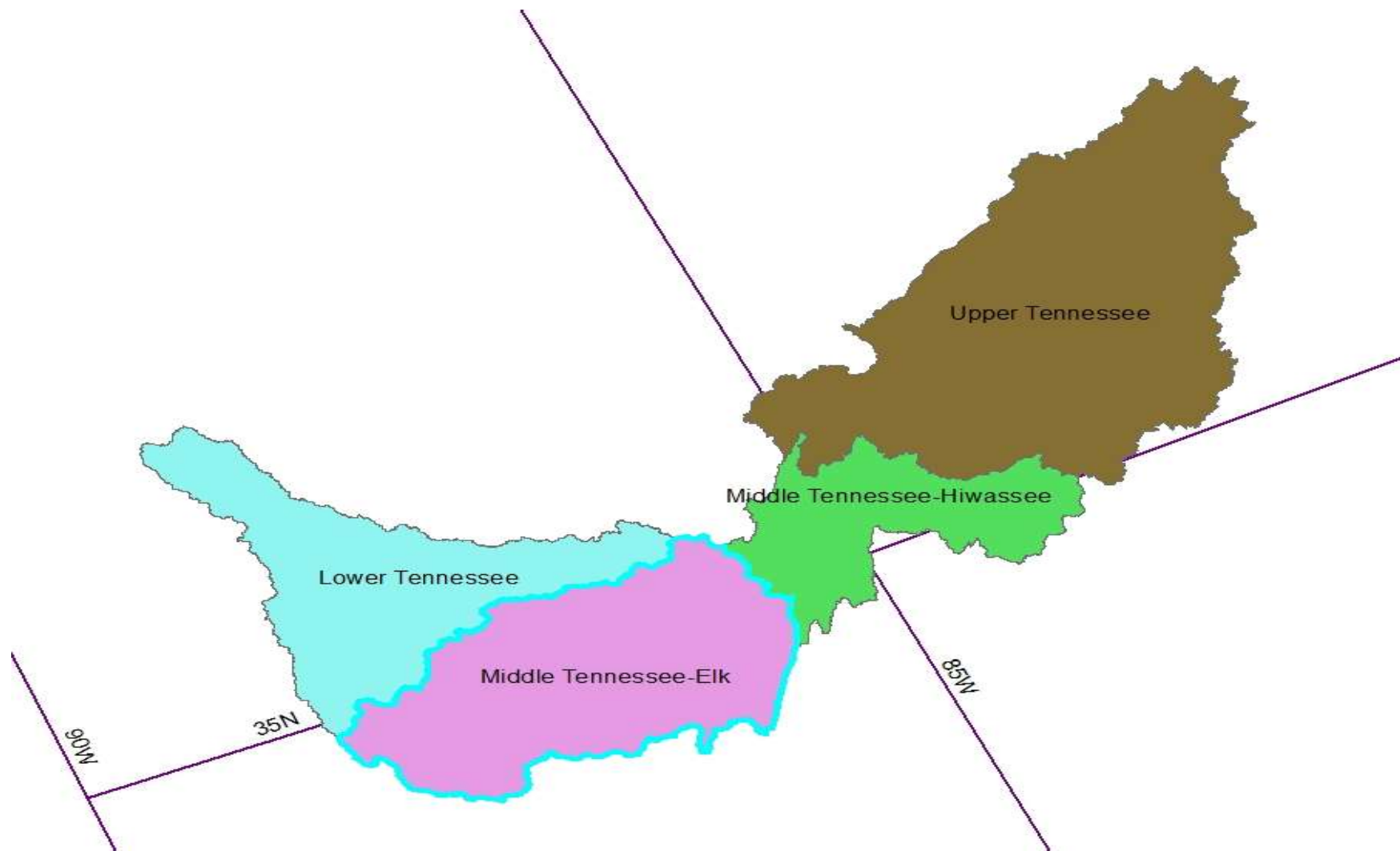
Big Picture:

- * Is the quantity of fresh water in the Sub-basin enough to support the ecology and economy of the area in the coming 50-70 years?
- * Quantitative modeling of the potential climate change and Rapid transformation of land use from traditional agricultural to urban use; may give some insight

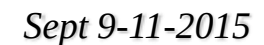
Data Availability for Modeling, Validation, and Verification:

- Use of IPCC modeling scenario outputs
- Satellite images, aerial photo
- Recorded climate and hydrologic/ hydro-geologic data

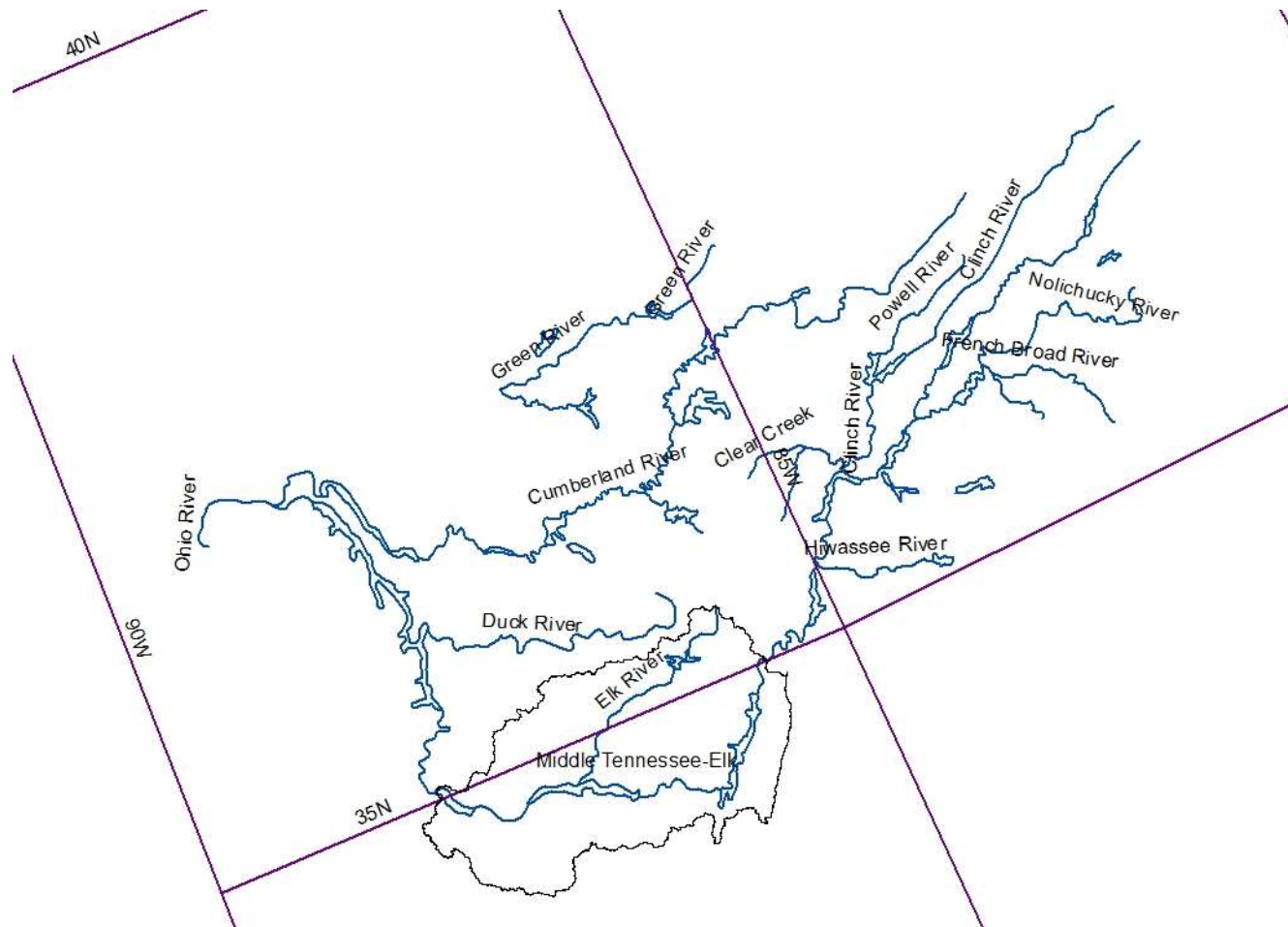
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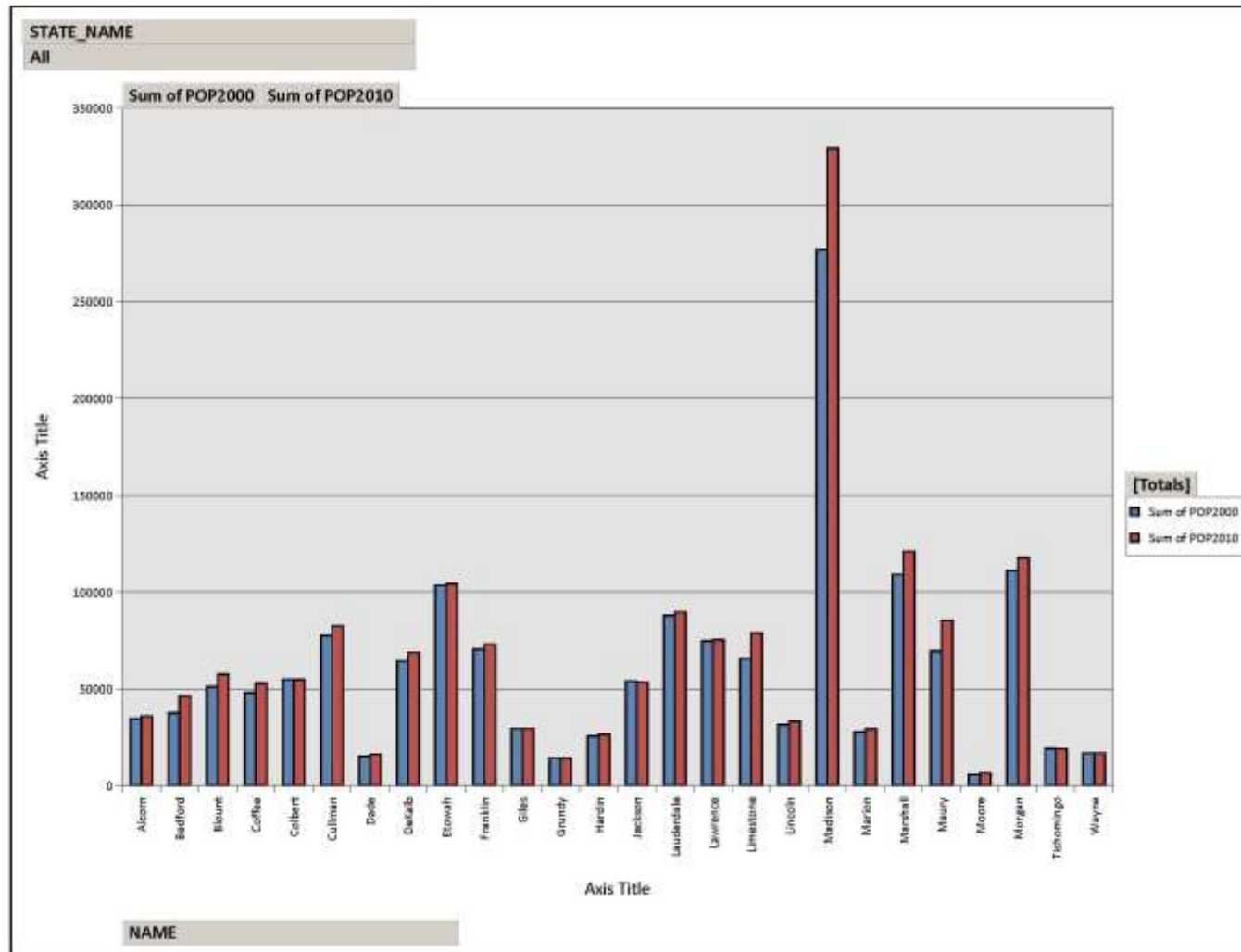
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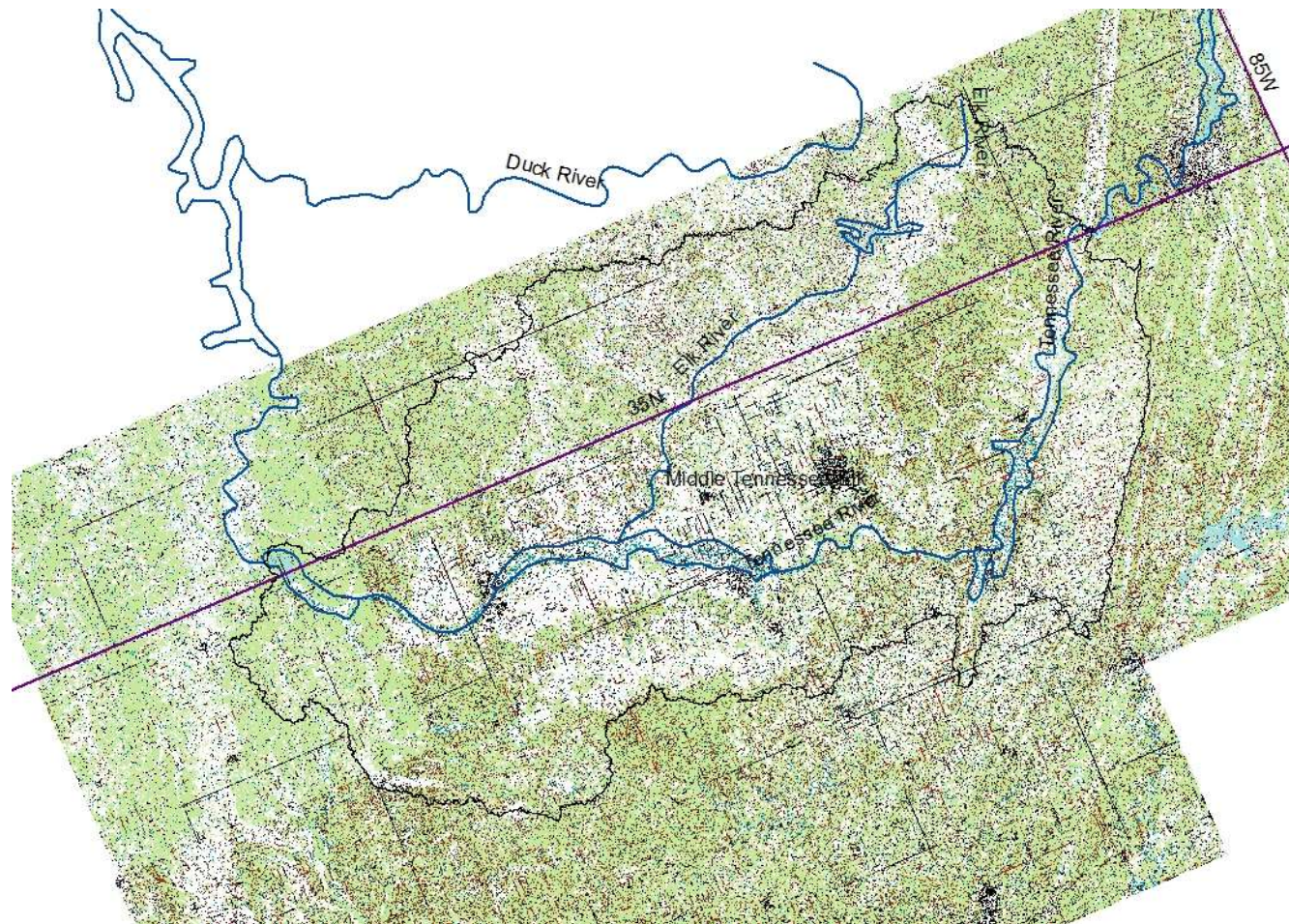
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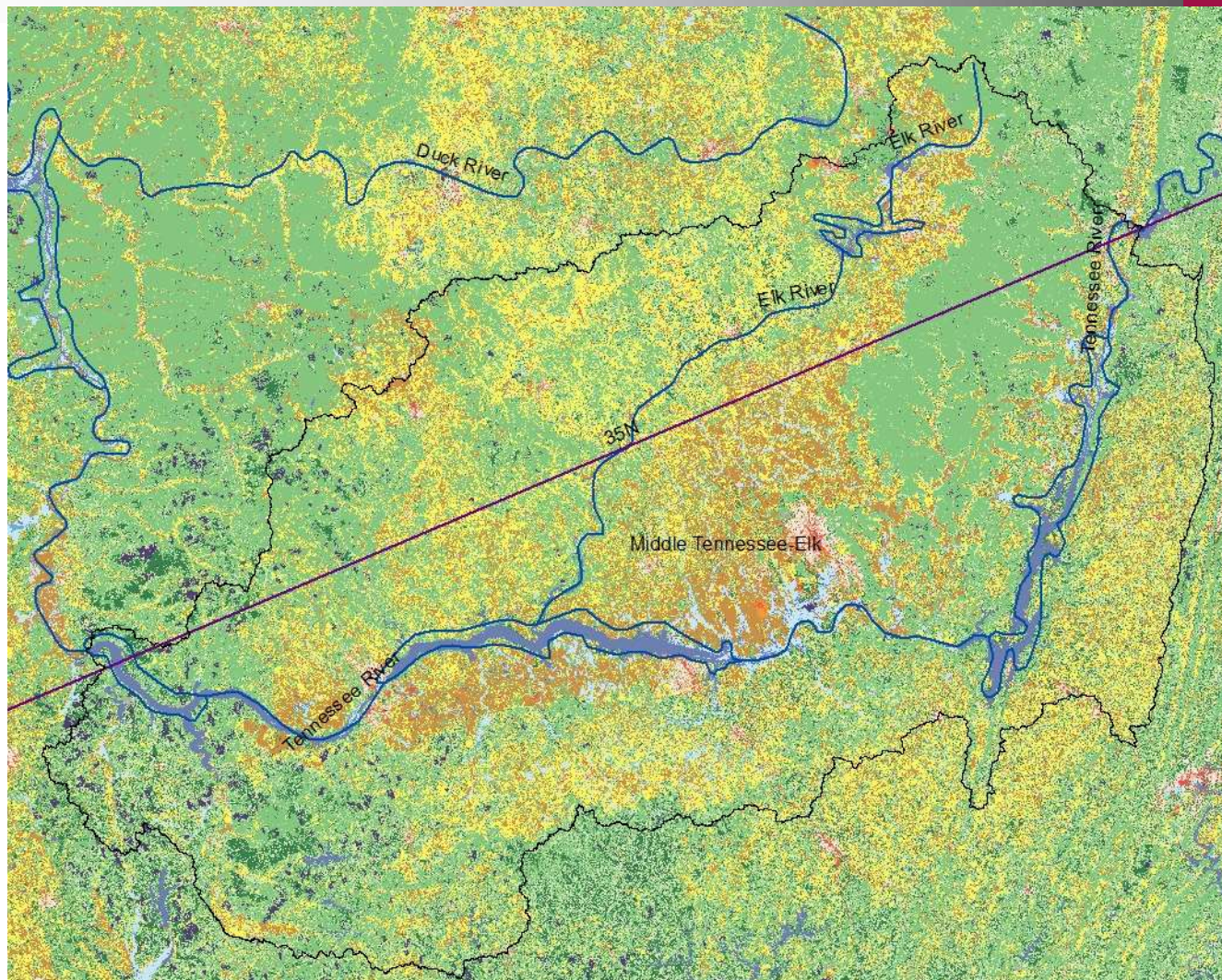
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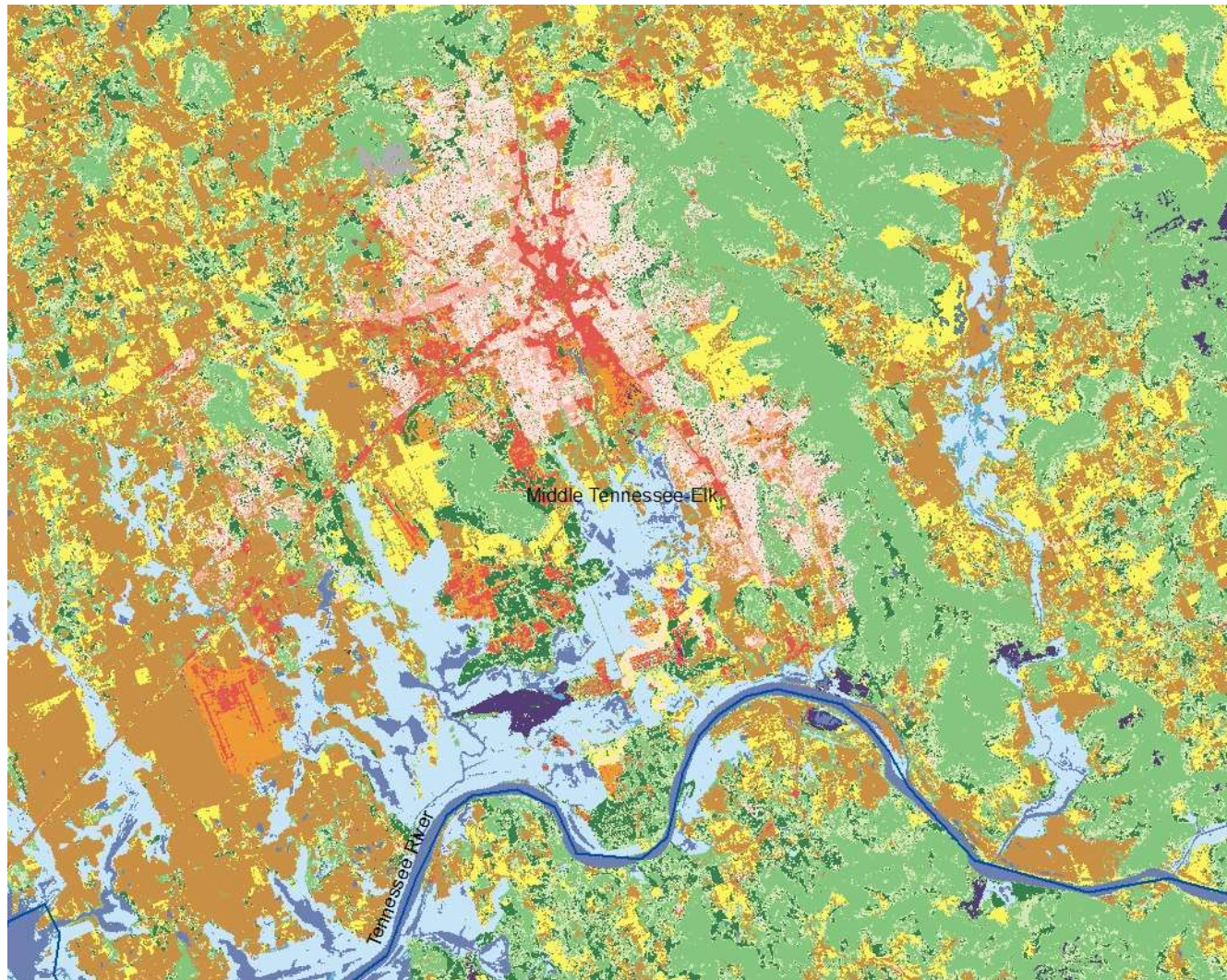
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Challenges in use of aggregated satellite image:

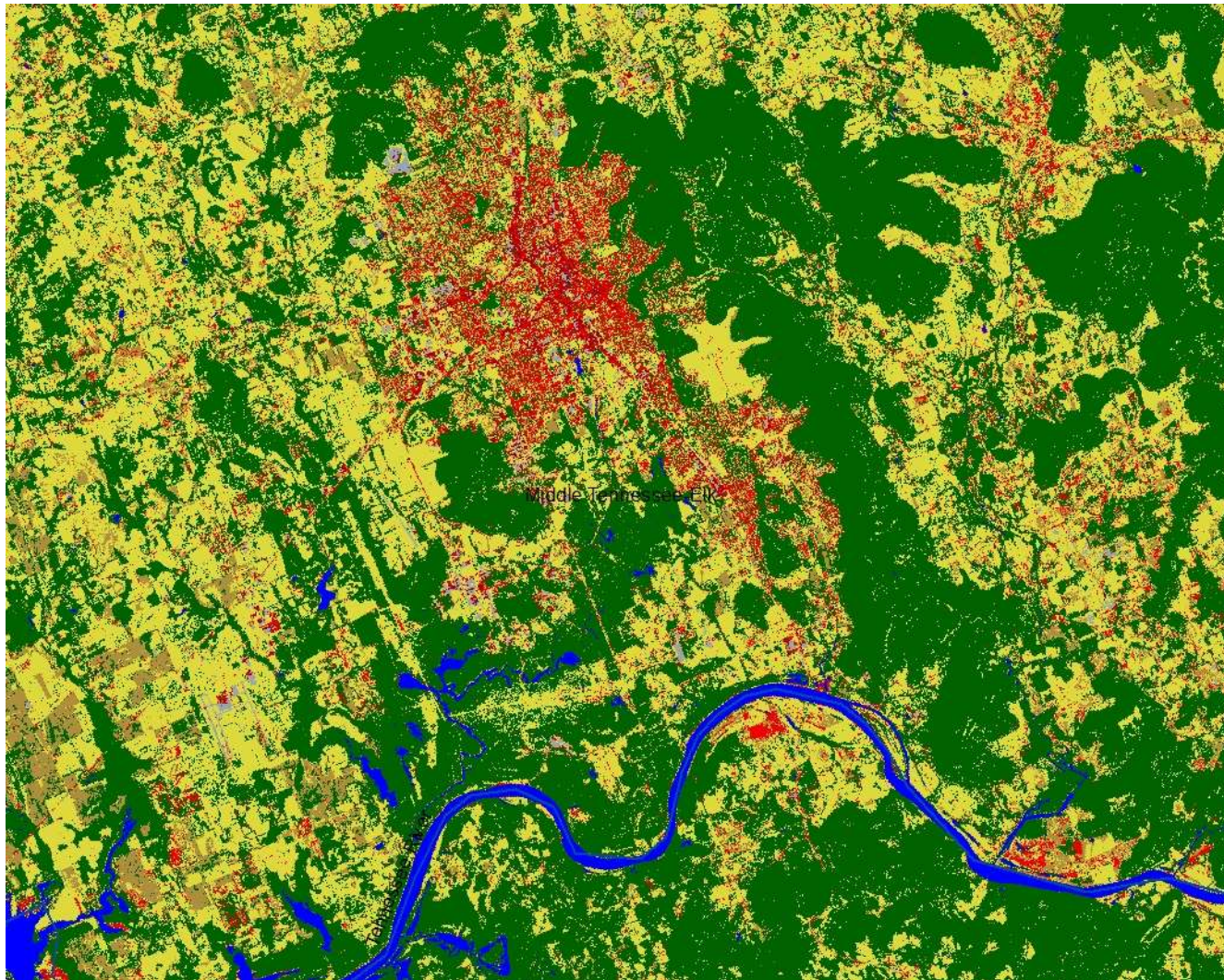
- Images are from different seasons, daytime
- From different sensors
- quality loss while merging for a composite output
- Unintentional artifact generation while processing

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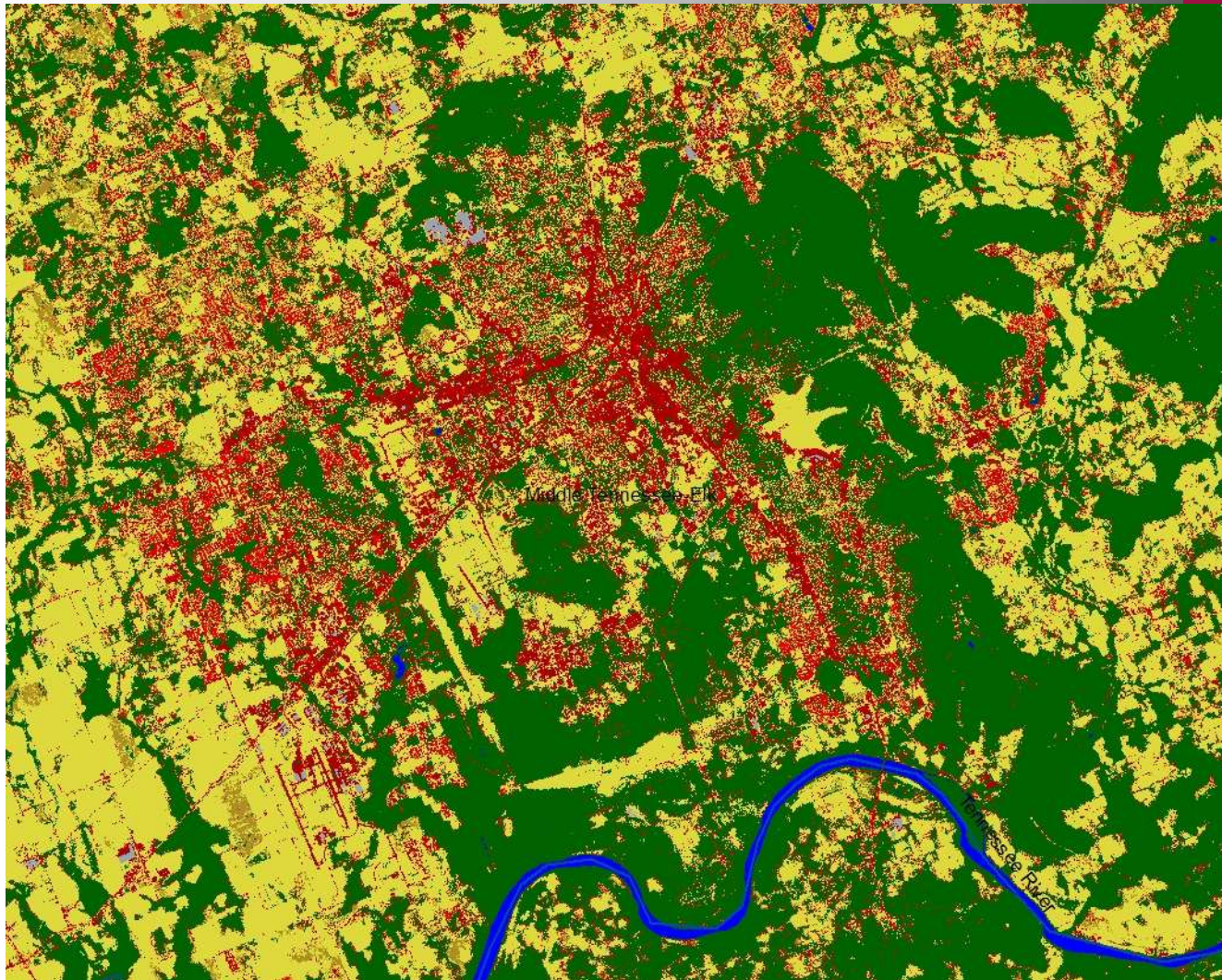
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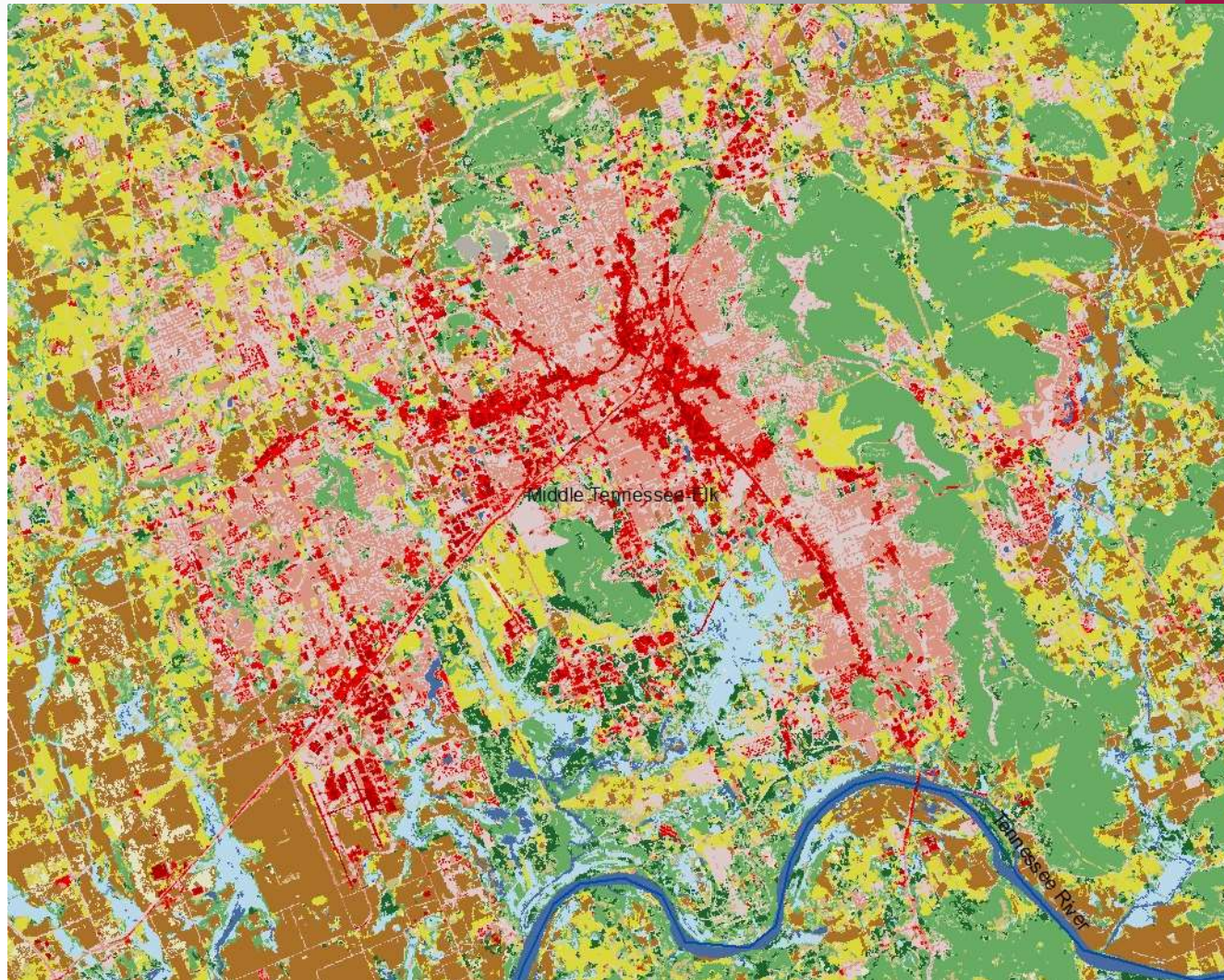
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Conclusion:

- There is an inherent bias in satellite image classification
- Use of higher resolution images may help to get better result