Linking Urban Land Use to Metabolic Regimes

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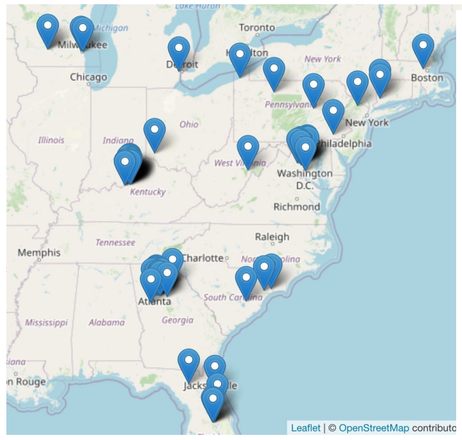
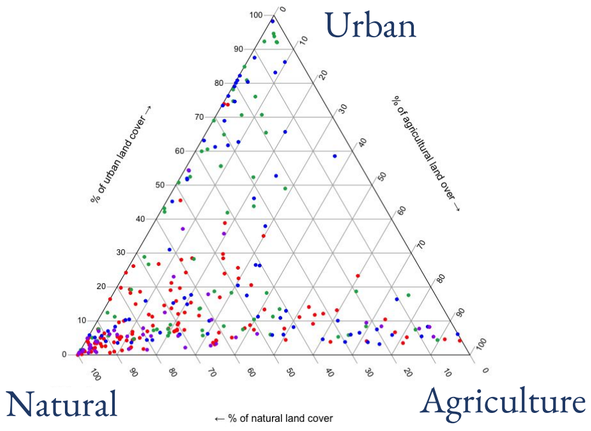
Goal: Investigate the impacts of land use on river metabolic regimes

1. Identify land use and covariate variables that impact metabolism



Locations of filtered sites East of MS, precip > 80 mm, size < 250 km^2



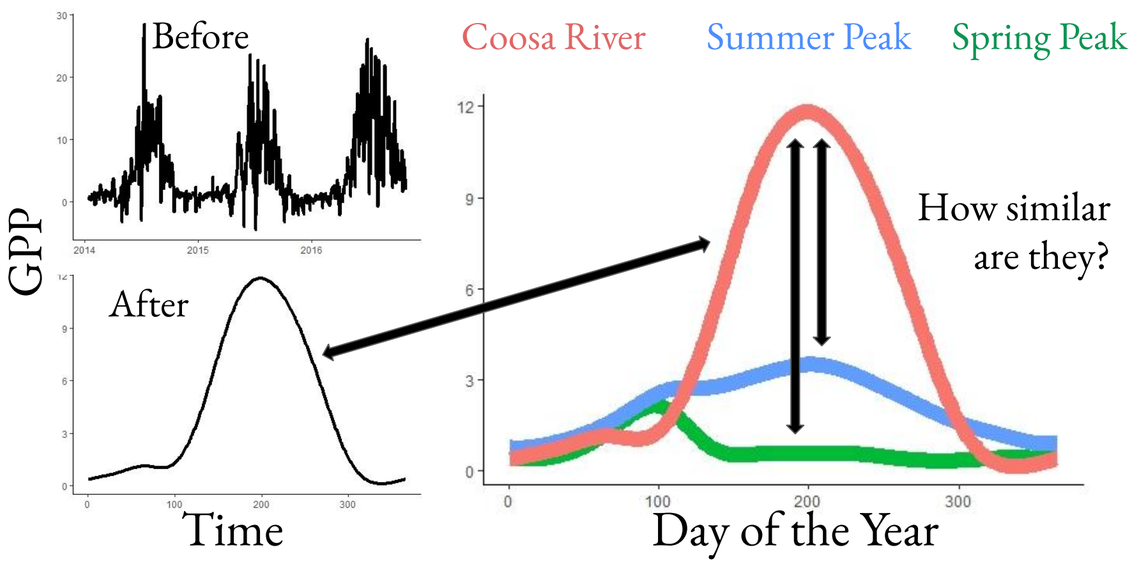
- Land use distribution of filtered sites,
- Analyze by axis

2. Assign existing metabolic archetypes to rivers in the dataset

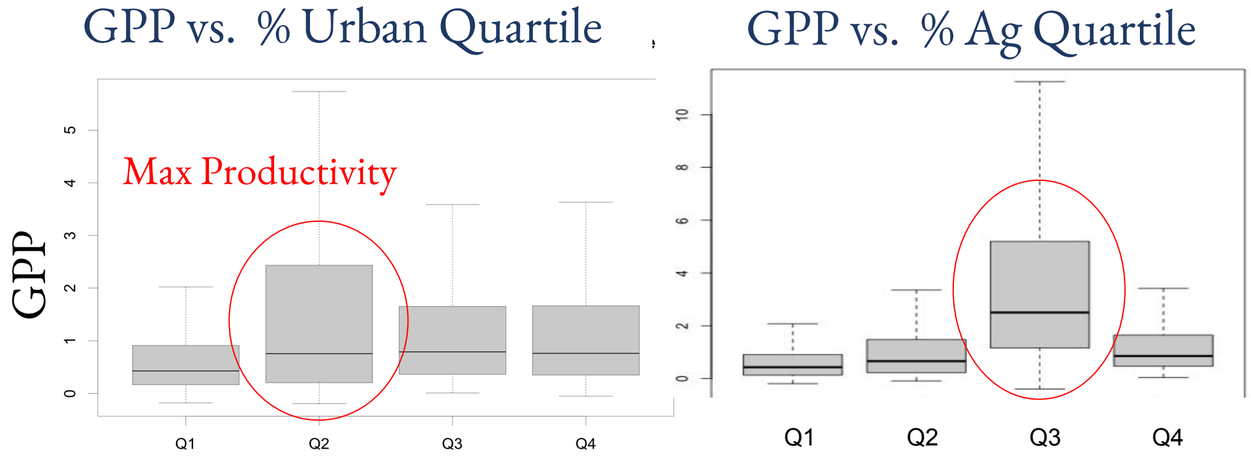
Archetype → Categories of metabolic regimes

Coosa River

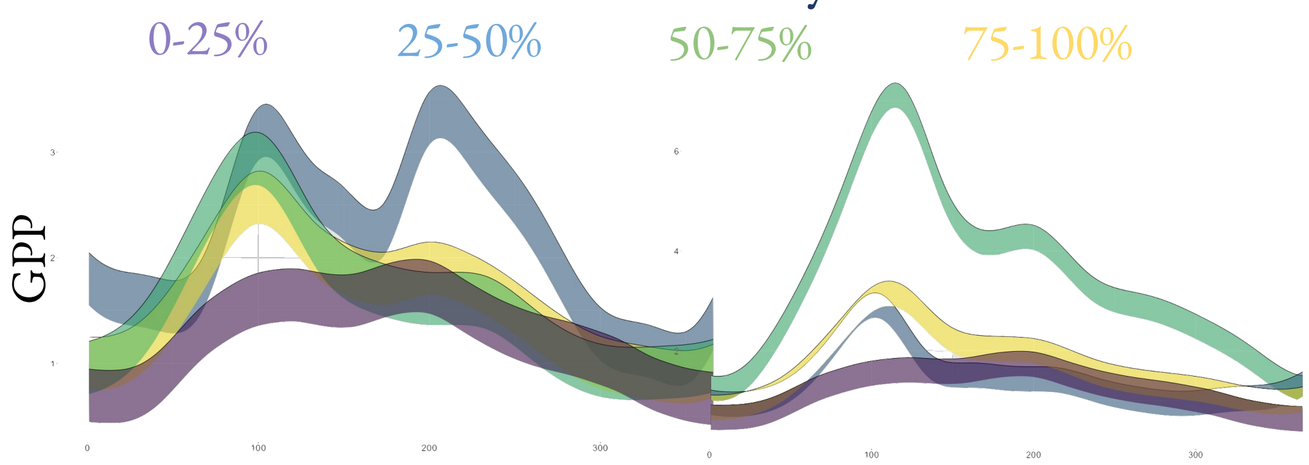
Wrangle Time Series → Construct Archetypes → Compare and Assign



3. Explore how land-use relates to metabolic time series



Annual Metabolic Timeseries by % Land Cover



Conclusion:

GPP changes non-linearly in response to increasing land use

Hypothesis for Future Research:

Impacts of covariates (nutrients, canopy) are realized at varying levels of land intensity for each land cover