Linking Urban Land Use to Metabolic Regimes

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 km²

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

2. Assign existing metabolic archetypes to rivers in the dataset

Archetype → Categories of metabolic regimes

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

GPP vs. % Urban Quartile

Max Productivity

Annual Metabolic Timeseries by % Land Cover

0-25% 25-50% 50-75% 75-100%

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