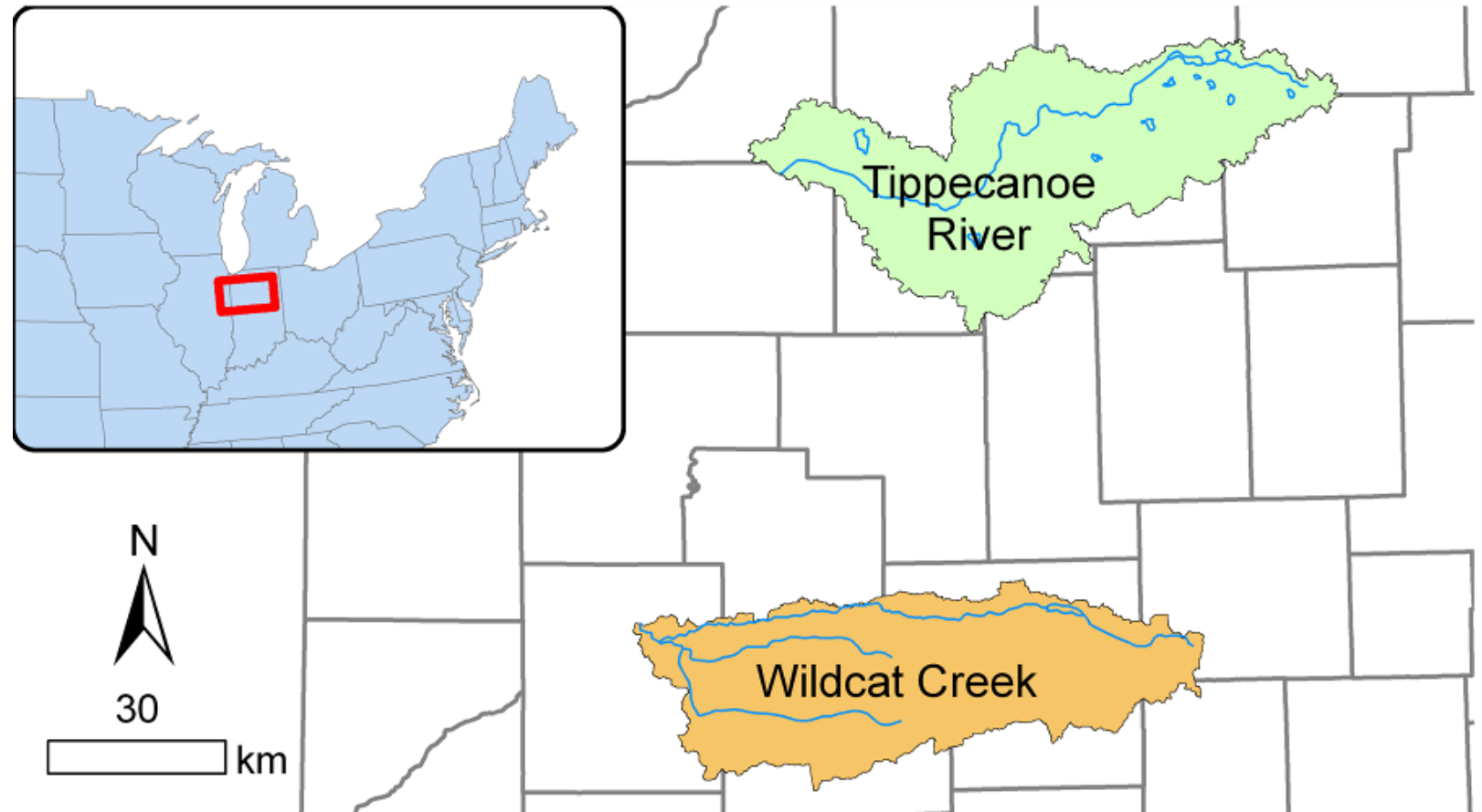


Differences in Stream Flow between Tippecanoe River and Wildcat Creek

Location & Background

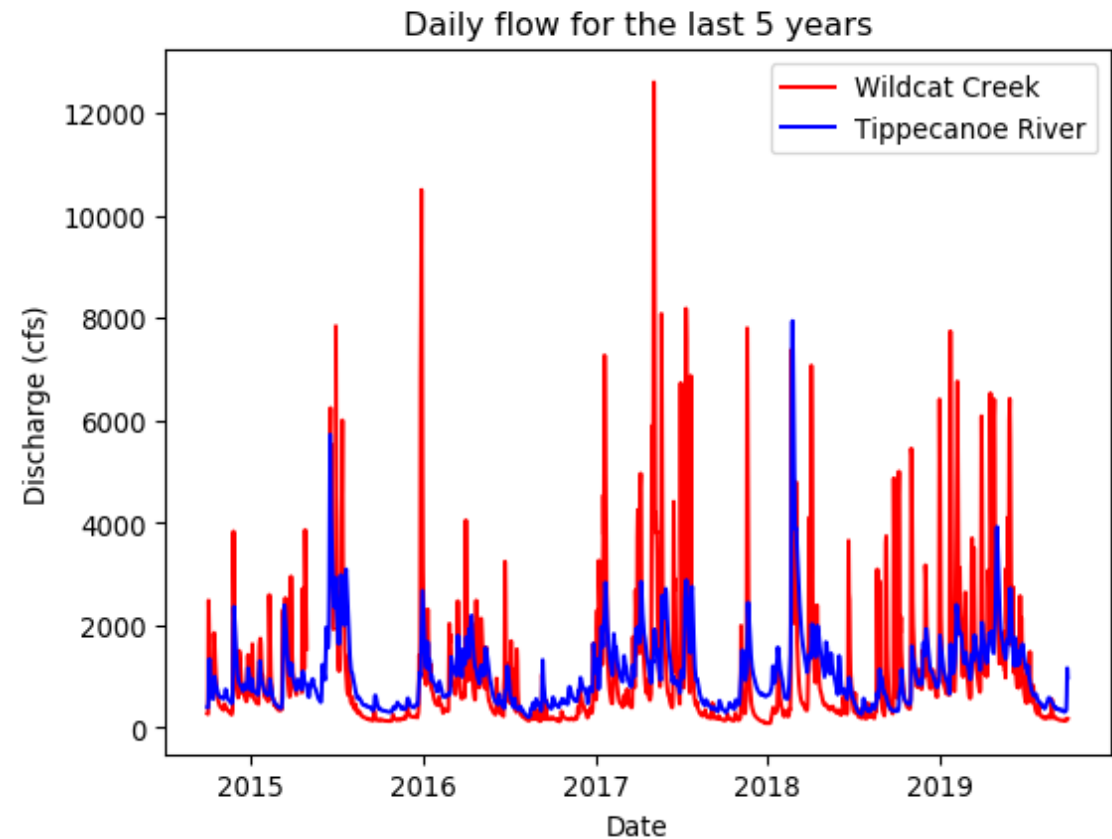
- **Similarity**

- central Indiana
- no significant difference in climate
- agricultural use



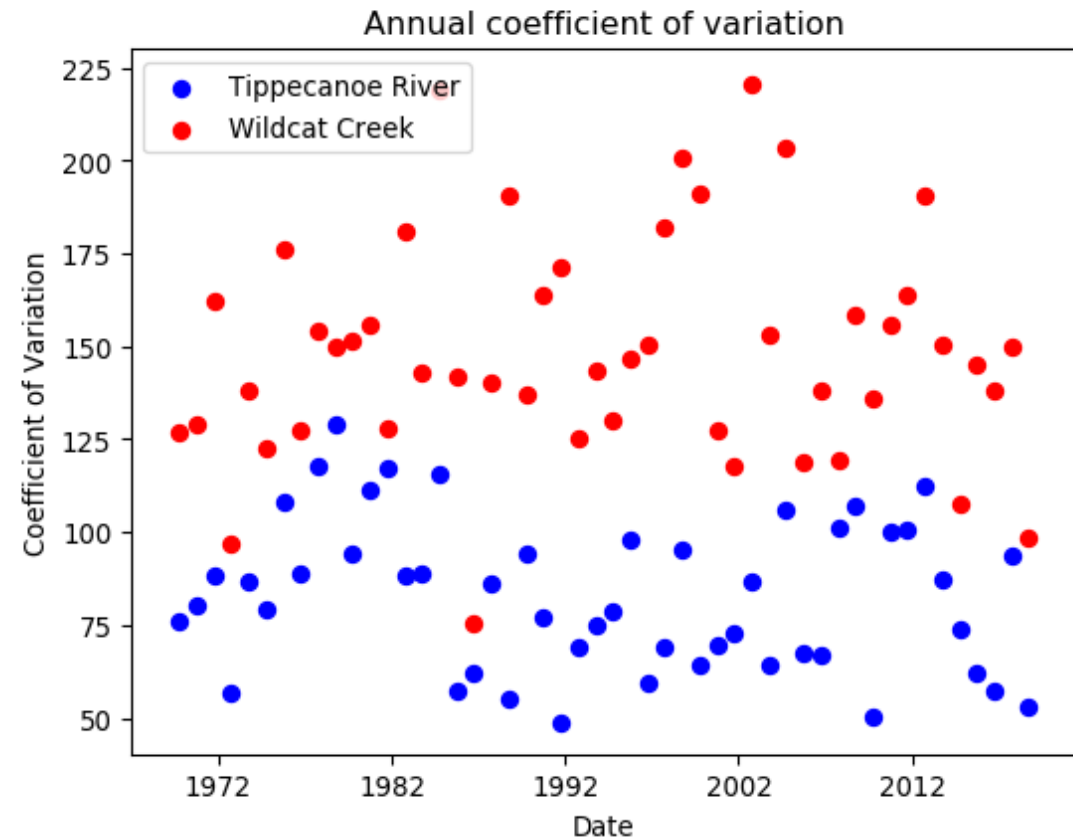
Daily flow for both streams for the last 5 years

- Higher daily stream flow for Wildcat Creek
 - Especially in 2016, 2017 and 2019



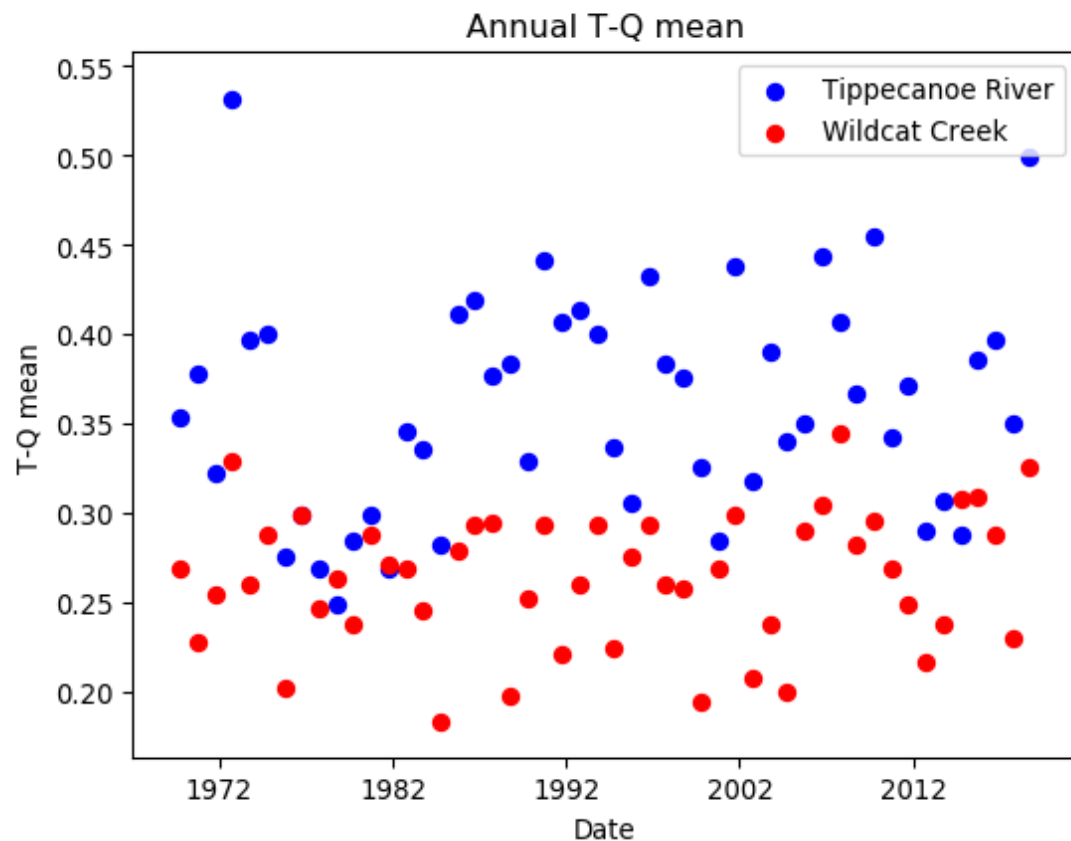
Annual coefficient of variation for both streams

- Higher annual coefficient of variation for Wildcat Creek throughout the record (>100)



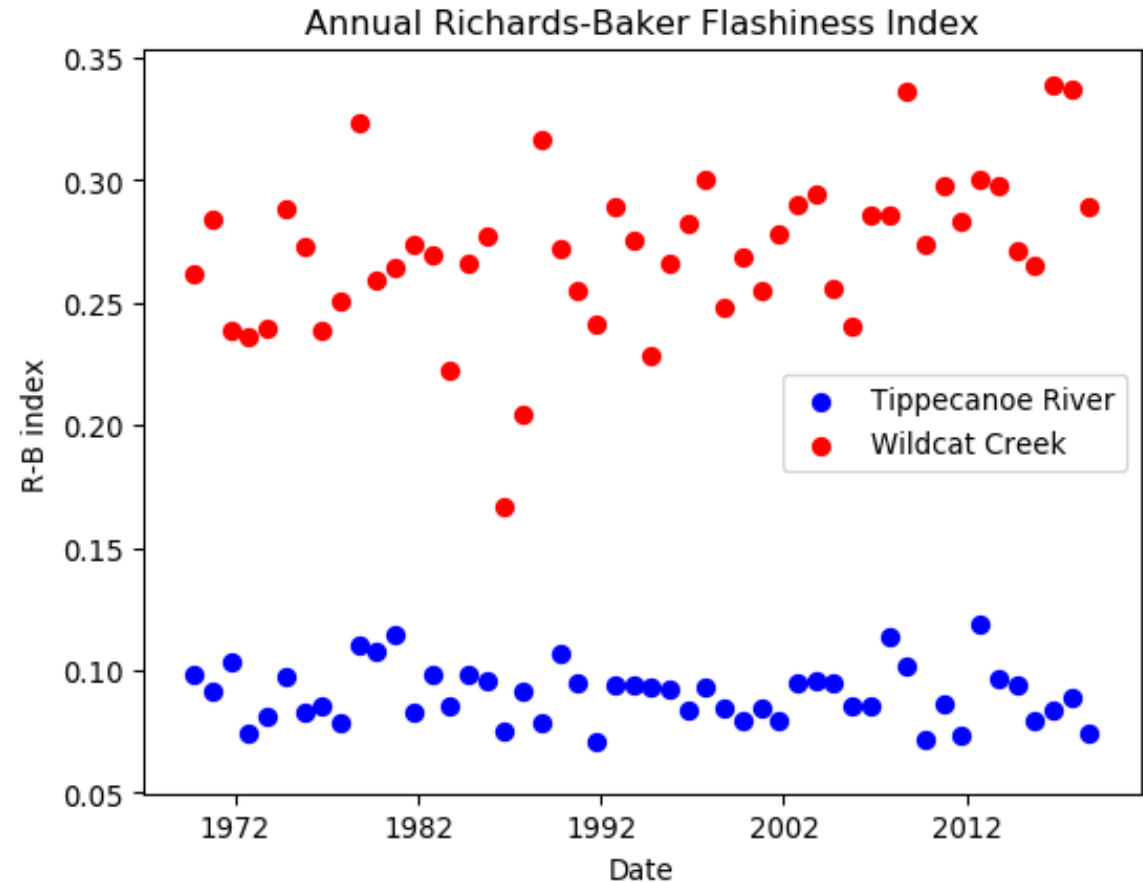
Annual T-Q mean for both streams

- Higher annual T-Q mean for Tippecanoe River throughout the record (>0.25)

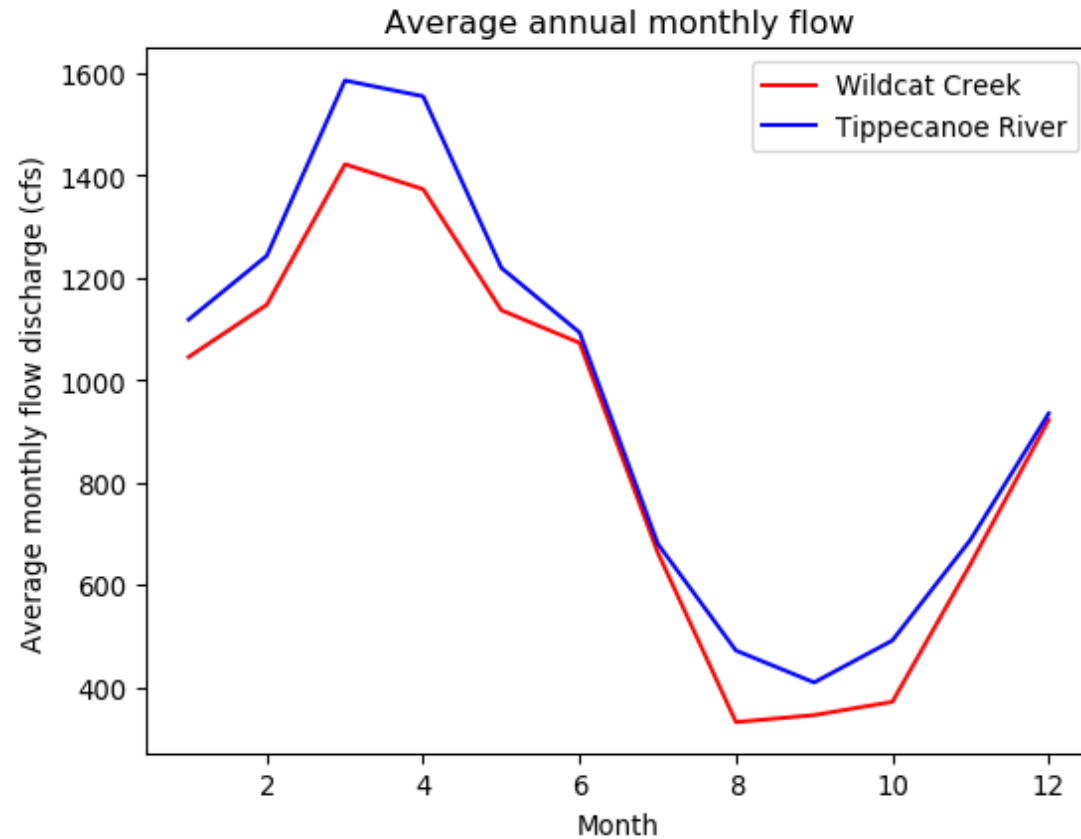


Annual R-B index for both streams

- Clear boundary between R-B index of two streams
- Wildcat Creek is always 0.05 to 0.15 higher



Average annual monthly flow for both streams



- **Much similar in average annual monthly flow**
- **Tippecanoe River has slightly larger discharge**

Return period of annual peak flow events for both streams

- Calculated by

$$P(x) = \frac{m(x)}{N + 1}$$

- Rank 1 is the highest event, and rank N is the lowest event

