



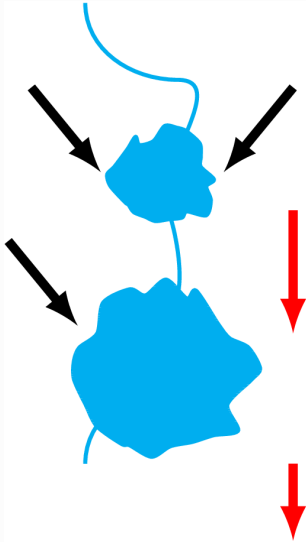
Does Lake and Stream Connectivity Control Phosphorus Retention in Lakes?

Joseph Stachelek and Patricia Soranno
University

Michigan State

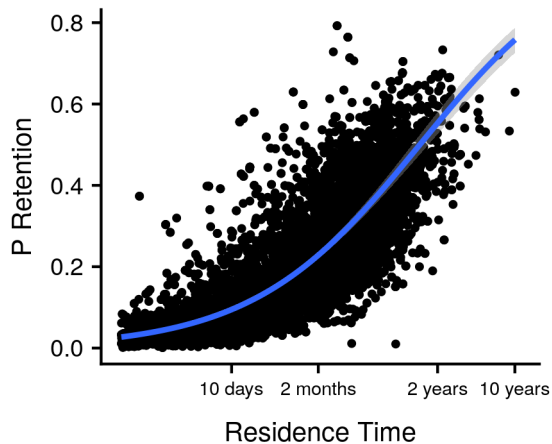
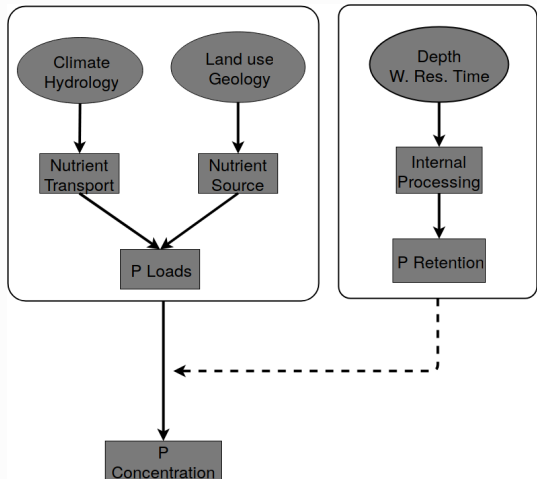
2018 June

○ P RETENTION IS IMPORTANT AND WELL-STUDIED

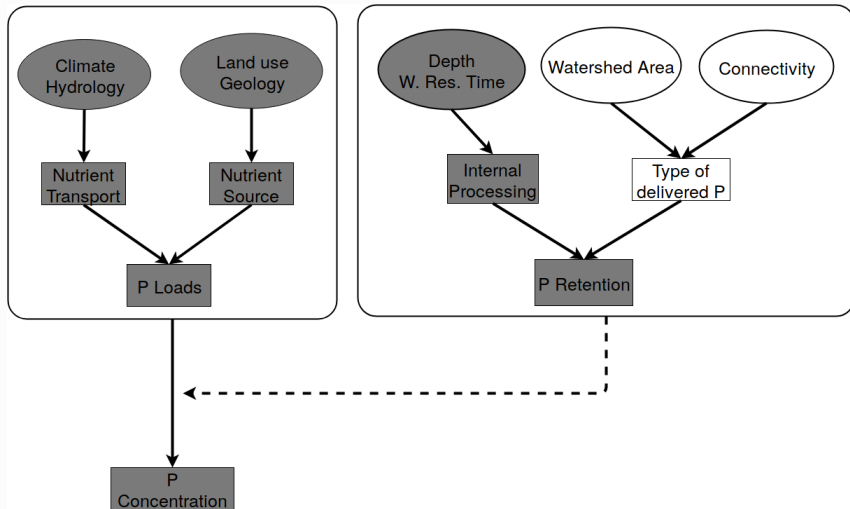


- Lit citations

P RETENTION IS NOT JUST ABOUT WATER RESIDENCE TIME



WHAT ARE SOME OTHER POTENTIAL CONTROLS ON P RETENTION?



MULTIPLE WAYS TO DEFINE CONNECTIVITY

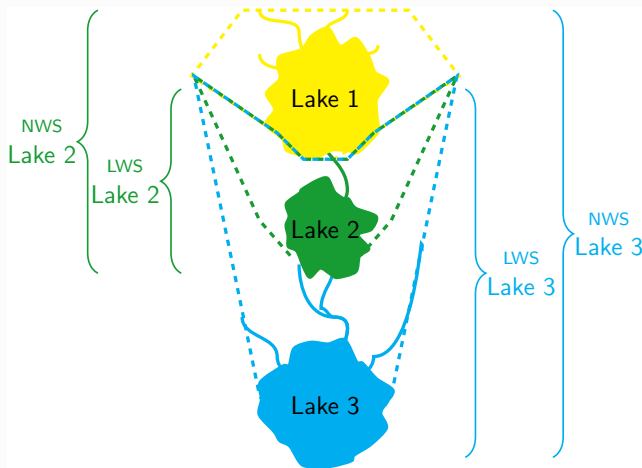
Closest Lake Distance: Network distance to the closest upstream lake.

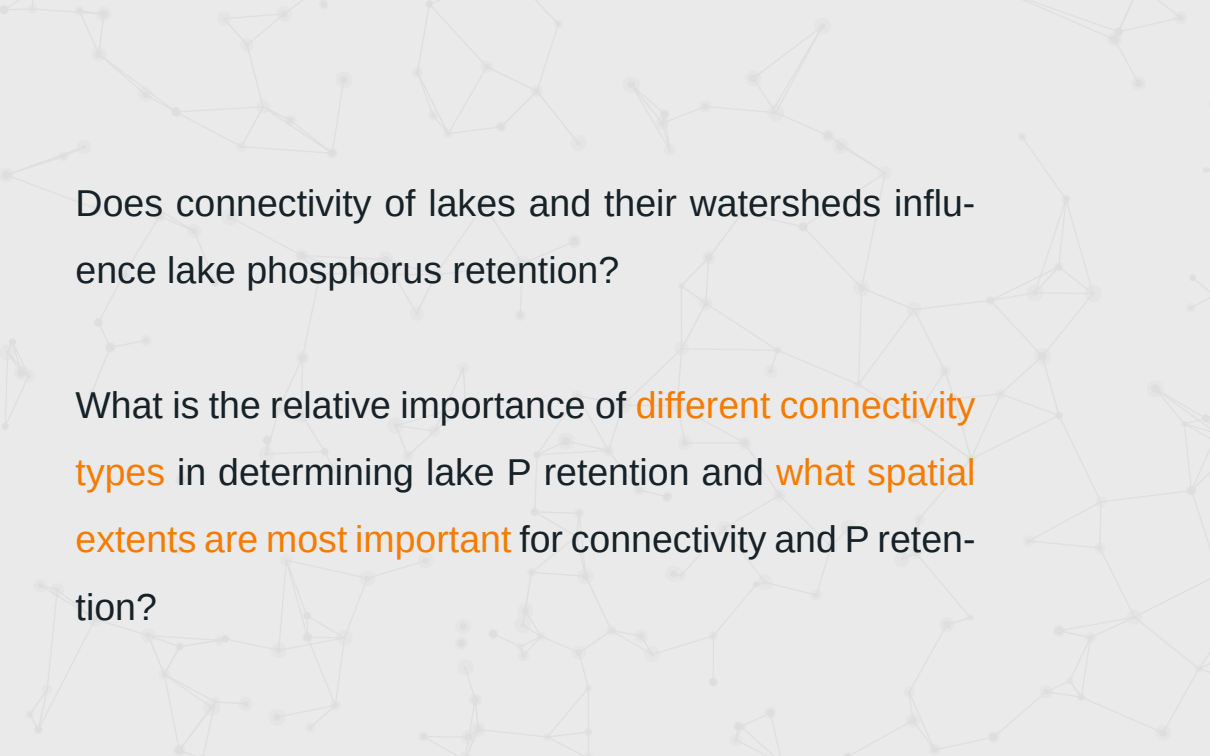


Average Link Length: Sum of the total length of stream reaches between junctions divided by the total number of reaches.



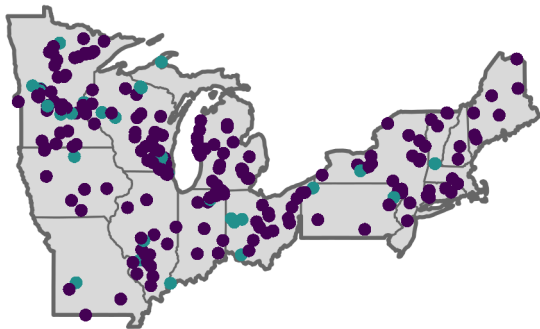
WHAT IS AN APPROPRIATE SCALE FOR MEASURING CONNECTIVITY?



A faint, light gray background pattern consisting of a network of interconnected nodes and lines, resembling a molecular structure or a complex web, covering the entire slide.

Does connectivity of lakes and their watersheds influence lake phosphorus retention?

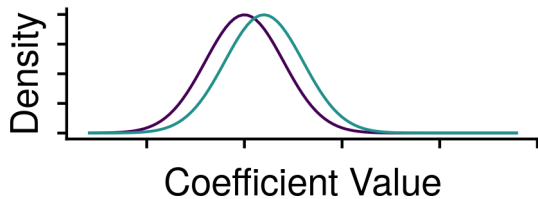
What is the relative importance of **different connectivity types** in determining lake P retention and **what spatial extents are most important** for connectivity and P retention?



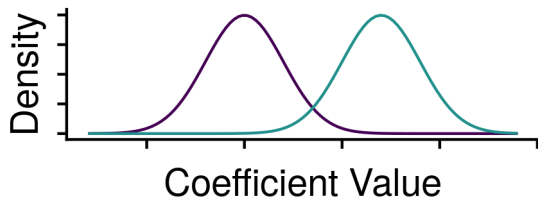
connectivity

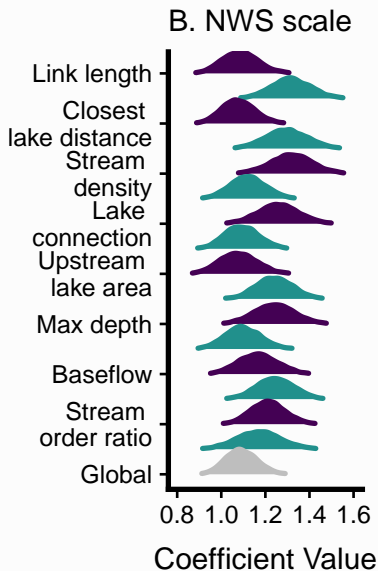
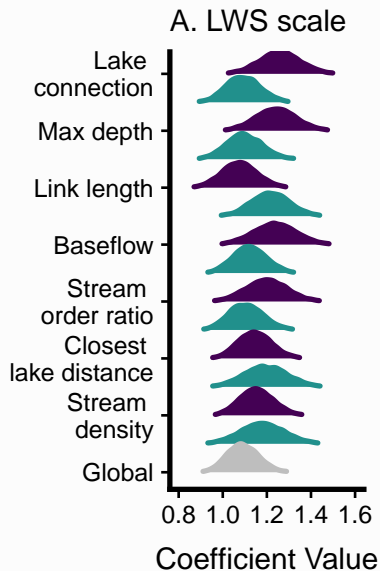
- High
- Low

No Connectivity Effect



Connectivity Effect





CONCLUSION

