

The authors have done a good job the reviewer comments. I would suggest the paper only needs minor revisions at this point. The discussion needs the most work, and I provide some specific suggestions. I hope they help.

1) It is unclear to me how the authors decided which ponds were hydrologically controlled. I can't find the pattern in Table 5, not the text. It may be me. If not, please provide.

2) Figure 6: I find it hard to differentiate the lakes (especially Left and Strange). Maybe use a rainbow legend for DOY and a white dot for Strange.

Specific comments in specific places:

Page 6 Line 5: Do you mean to say 'spatial' twice here?

Page 6 Line 27: When you say 'inlets', do you mean channels, or inflows / outflows?

Section 3.4: You need to reference Figure 6 in this paragraph.

Page 8 Line 7: The two nitrogen species behaved in specific ways, as did other constituents; sometimes. Perhaps be specific about which species were most affected by landscape scale patterns.

Page 8 Line 24: This is not what Figure 5 shows.

Page 8 Line 30: You need a segue here. Maybe start the paragraph with "The importance of biogeochemical versus hydrological processes can be informed by the location of individual ponds and chemical species in PCA space."

Page 9 Lines 1 and 3: Less vs. lesser?

Page 9 Line 5: Maybe move this content about calcium to the previous paragraph as an example of the biogeochemical processes of importance.

Page 9 Line 12: I found the content of this paragraph confusing and tangential. What study had 20 lakes? There is some information missing here. I think the authors are trying to put their work in the context of others, but that is not coming across well. Link it all better together or delete it all.

Page 9 Line 25: Please include a statement of what impact the use of the curve fitting method may have on your results of which ponds are hydrologically driven or spatially variable (or not). Maybe refer to Figures 6 and 2 and Table 5 here. Can problems with the method explain differences between the hydrology and variability classifications?

Page 9 Line 33: This sentence has too many thoughts in it. Break it up.

Page 11 Line 11: I still maintain 'synchronicity' is not the word you need. Change them all to synchrony.

Page 11 Line 28: When discussing pond hydrology be specific. Hydrology could mean any flux, including change in storage, evaporation etc. You really mean inflows and outflows here.

