

Interactive comment on “Effects of anomalous high temperatures on carbon dioxide, methane, dissolved organic carbon and trace element concentrations in thaw lakes in Western Siberia in 2012” by O. S. Pokrovsky et al.

Anonymous Referee #1

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This work covers several interesting themes: the impact of an extreme weather event, the importance of small bodies of water in Arctic landscapes for the greenhouse gas budget, and the availability of dissolved and colloidal trace elements in thaw lakes. These three themes are a little disparate, although a decent effort is made to integrate them into a coherent whole. The sampling and analytical methods appear to be sound and the presentation and interpretation seem logical. This version is greatly improved over the previous draft I reviewed, and I see that the authors responded to my major concerns (statistics are now well-described, a discussion of the residence

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time of dissolved CO₂ was added, etc.). There are still a few minor grammatical errors, but this aspect is also greatly improved. In particular, I think the phrase "anomalous hot" should be "anomalously hot." Also, I suggest that the conclusions section begin with the most important finding: that concentrations increased in 2012, rather than the inverse relationship between lake surface area and concentration.

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