

Geosci. Model Dev. Discuss., community comment CC2  
<https://doi.org/10.5194/gmd-2021-409-CC2>, 2022  
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## **Completing my 'General and editorial comments on gmd-2021-409'**

Jack Settelmaier

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Community comment on "Inland lake temperature initialization via coupled cycling with atmospheric data assimilation" by Stanley G. Benjamin et al., Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2021-409-CC2>, 2022

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I have repeated, and added a few more comments after reading to the end.

It's great to read of such a reduction in errors, from 5-10K to 1-2K. I've seen how lakes often stand out in some of the NWP-based output

our NWS use (e.g. NBM). It's interesting, as well, that some of our lakes dry up to some degree in Texas and the Southwest.

I'm sure you know, but I'm staring at 1-d use, vs 1-D. Is former really correct?

Line 128 (small-lake) vs 137 (small lake)

Line 177 "lake cycling" I'm unfamiliar with, but I assume it's the thermal turning over of the lake water. Maybe add a quick definition?

Line 202 first to mention HRRRv3 rather than just HRRR?

Line 244 FVCOM. How does that relate/differ from FV3 I see more referenced these days?

Line 256 I suppose it's also proper to be specific about Laurentian Great Lakes vs Great Lakes.

Line 279 "20 s" vs 20s vs 20 sec

Line 293 Was GLOFS deined before this mention?

Line 299 I had no idea there was 15" (inch?) MODIS data!?! Wow.

Line 323 "ocean-contiguity" new for me. Meaning connected water?

Line 332 "25-m" but above in 279 you use "20 s" Is that proper? Adjective vs noun I presume

Only read through Page 13 today.

Line 422 pseudo-innovations (new term to me; despite reference, maybe worth a line of description?)

Line 485-489 Fig 7 You nicely define the difference between HRRRv3 (NCEP Oper) and HRRRv4 (HRRRx), however you do so AFTER you already have a like caption in Figure 6 where that detail is not defined (Line 454-456).

Also, I see you spell out "Figure 6." in line 454, vs "Fig. 7." in line 485

Line 505 and 514 I see the way you have linked the two Tables using the "No. from Tab. 5" column in Table 6, when it seems it would just as easy to reference Table 5's Lake Number column?

Bottom-right image of Page 22, has a spurious? little "Plot Area" overlay on the Lake Tahoe chart?

Line 605 "the lake depth for most lakes is too deep" Should that be "the HRRR-CLM simulated environment lake depth...."?

Line 624 (D22, J22) refers to?

Line 663, 669 "US NWS" and "US NOAA" Maybe the former could be "US NOAA NWS?"

Line 685-690 Will those author references remain as initials?

Thank you so much for allowing me to review the paper; I learned more on a topic that was previously unfamiliar with, and learned some new words (e.g. dimictic, polymictic, and monomictic).