

Hydrol. Earth Syst. Sci. Discuss., referee comment RC2
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Comment on hess-2021-168

Anonymous Referee #2

Referee comment on "Robustness of a parsimonious subsurface drainage model at the French national scale" by Alexis Jeantet et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2021-168-RC2>, 2021

General comments:

The manuscript presents an assessment of the SIDRA-RU drainage model in its capacity to model a range of data collected from throughout France. The utility of the model is assessed in this context. The performance and robustness of the model is quantified. The study is a detailed analysis which would add greatly to the literature in this subject area. However it requires some improvements to reach a suitable standard for publication.

The clarity of English is a problem throughout and there needs to be a full review of the text by a native English speaker to remove the many grammatical errors. Some examples of unclear text include:

Line 26: "deep-water infiltration issues"

Line 29: "impervious layer that stops the natural waterlogging of soil"

Line 33: "digging a gallery"

Line 36: "In local conditions"

It is clear that the authors have not reviewed the style of language with a native English speaker as these issues are evident throughout. Some more are listed below. I have not

provided an exhaustive list.

The text is overly elaborate, which adds to the length of the manuscript but reduces clarity of the points being made. Please reduce the volume of text and focus on clarity of messages—a native English speaker will also help in this regard.

There is a tendency to drift into the discussion of the results in the results sections. Please keep a clear distinction between results and discussion sections.

Specific comments:

Line 55—it is not clear how the estimate of 4 v 20 is arrived at? 4 seems low while 20 appears high in reality.

Line 74 replace “would be” with “is”

Line 88: “Agricultural drainage is applicable in this diversity”—this is unclear

Line 100 – 110: this section should be shortened for simplicity

Table 1: Again the terminology is off, “chronic length” “half gap”—spacing ?

Line 133: the “post treatment” applied is not clear

Line 146: Techniques is misspelled

Line 147: Chronics?

Line 145-163: an example of an excessively long element of text

Line 205: "nervousness" this is not a clear term

Line 299: it is not clear how the model is defined as acceptable on clay soils when it is shown, in one case, to not meet the desired threshold of 0.5+. It can be said that it is acceptable for most clay soil scenarios, but not all.

Line 320: Replace "respect" with "represent"

Line 328: Seems to contradict the previous sentence, subtlety of language here is vital.

Line 339-341: Vague terms such as "very close", "close", "near" are used to describe Figure 6 data. What criteria is this range judged against?

Line 342-344: Use a single metric to describe the ranges as in line 347, not 50% range for x to y and 98% range from a to b

Line 365/366: Saint Laurent_P2 is not detailed in table 2. What are the authors refereeing to here and can this sentence be clarified?

Line 442: what is meant by a "small step behind". Vague terms like this should be avoided

Line 533: This sentence is unclear