Hydrology and Earth System Sciences

Manuscript title: Ratio Limits of Water Storage and Outflow in Rainfall-runoff Process

Response to Referee

Dear Editor Roberto Greco

We sincerely thank you and the referee for the re-examination of this manuscript. The valuable comments are very helpful for us to revise and improve this manuscript. Based on the referee's comments, we revised the manuscript, and the revised parts are marked in red color in the revised manuscript. Please kindly go through our responses below. Thank you very much.

Kind regards

Zhu

Response to Referee

No.	Comments	Response
S-1	"Merkuryeva, et al., 2015; Merz, et al., 2021; Ruidas, et al., 2022" **Comment:** I am not sure that you need a comma between the first author surname and "et al.", please check the journal requirements. I would write "Merkuryeva et al., 2015" etc.	Thank you very much for your comment. We have rechecked the journal requirement of in-text citations, and we deleted all commas between the first author surname and "et al.".
S-2	", etc" **Comment:** This is not needed: you say "hydrological models include..." so the reader knows that the list is not a complete one	Thank you very much for your comment. We have deleted the ", etc" in the text.
S-3	"Kim et al. (2012); Liu et al. (2019); Hoch et al. (2019)" **Comment:** ,	Thank you very much for your comment. We revised the ";" to ",".
S-4	"For this goal, a "plume" shaped nonlinear relationship between the inside average water depth and the outlet water depth, namely the water storage ratio curve, was found by using the calculation results of the hydrodynamic model." **Comment:** Not sure this belongs here as it is a spoiler of the results	Thank you very much for your comment. Yes, this sentence maybe should not be stated here, so we deleted this sentence.
S-5	"steady limit(H/h=0.625), and lower limit(H/h=0.4125)" **Comment:** space missing	Thank you very much for your comment. We added spaces in those expressions.
S-6	"1.0 (Fig. 3a)" **Comment:** The slope of the envelope line would be 1 if the axes had the same ranges, but since the vertical axis goes from 0 to 1 while the horizontal one goes from 0 to 100 I would say the slope of the line is 1%, what do you think?	Thank you very much for your comment. Yes, we recheck the results, and it indeed should be 1%. We added the "%" in the text.
S-7	"(a) discharge process lines during water rising and falling; (b) gradient lines of discharge process line during water rising and falling; (c) schematic diagram of looped rating curve; (d) water depth	Thank you very much for your comment. We revised the figure identifiers to make them uniform with the descriptions.

	process lines during water rising and falling; (e) gradient lines of water depth process lines during water rising and falling; (f) change of water depth envelope line under different rainfall intensity (R), Manning's coefficient (nm), and slope gradient (S)." **Comment:** The figure identifiers in the caption are wrong with the exception of the first and the last	
S-8	"coefficient, and different slope gradients (Fig. 4c and Fig. 4d)" **Comment:** "coefficients (Fig. 4c), and different slope gradients (Fig. 4d),"	Thank you very much for your comment. We have revised the expression.
S-9	" the" **Comment:** remove	Thank you very much for your comment. We have deleted the "the".
S-10	"capacities" **Comment:** "capacity" also the one before	Thank you very much for your comment. We have revised the two "capacities" to "capacity".
S-11	"09 August 2022 00:00 - 10 August 2022 00:00" **Comment:** to	Thank you very much for your comment. We have revised the expression.
S-12	" 29 August 2016 01:00 - 31 August 2016 09:00" **Comment:** from to	Thank you very much for your comment. We have revised the expression.
S-13	"of of "	Thank you very much for your comment. We deleted the duplicate "of".
S-14	"(a) Aomori Prefecture; (b) Nissho Pass" **Comment:** add the event data in the caption	Thank you very much for your comment. We have added the event data in the caption.
S-15	"is that the" **Comment:** describes how	Thank you very much for your comment. We have replaced "is that the" with "describes how".
S-16	"is that the water storage ratio fluctuates" **Comment:** represents the water storage fluctuations	Thank you very much for your comment. We have replaced " is that the water storage ratio fluctuates" with "represents the water storage fluctuations".
S-17	"is that the" **Comment:** happens when	Thank you very much for your comment. We have replaced " is that the " with " happens when".
S-18	" (a) Aomori Prefecture; (b) Nissho Pass" **Comment:** add the event data in the caption	Thank you very much for your comment. We have added the event data in the caption.
S-19	"model-DRM" **Comment:** " (DRM)" no dash, no comma	Thank you very much for your comment. We revised the expression.
S-20	". While" **Comment:** , w	Thank you very much for your comment. We have revised the grammar.
S-21	", this" **Comment:** . T	Thank you very much for your comment. We have revised the grammar.
S-22	"i.e.," **Comment:** remove	Thank you very much for your comment. We removed the comma.
S-23	"rainfall intensity is less than 5.0 mm h^{-1}" **Comment:** remove	Thank you very much for your comment. We removed the "is".