

Response to Anonymous Referee #1 (Report 2)

The authors have convincingly addressed the comments from the first review round.

Regarding mainly my field of expertise, the economic part, the authors provide additional figures that greatly improve the understandability of the economic results.

A more detailed explanation and interpretation of the HAZUS model is added. Although the use of such an "external" model still has (and always will have) some sort of "black box"-character, I agree that the use of the HAZUS model seems appropriate in the present case. The authors now emphasize that the model is not really calibrated and that overall damages estimates were used as reference.

The (newly) presented underlying economic assumptions (industries at full a capacity prior to the event, fixed expenditure structure, potential positive impacts, homogeneous productivity per square foot, ...) are reasonable and indeed standard in similar economic models.

The calculation of the loss-probability curves and the corresponding expected annual losses in Figure 13 c) constitutes the major improvement regarding the presentation of the economic results.

Unfortunately, a simulation does not seem to exist for the 1-in-100 years event under the +15% streamflow scenario. However, one can reasonably assume that the losses would be at least as high as for the present 1-in-100 years event (probably much higher).

Thus, if the expected losses are really calculated as the area under the curves as marked in the figure, the expected losses for the future scenario are too low.

Furthermore, by looking at the figure, it seems that the marked area under the blue curve is actually larger than the one under the red curve (because of the missing 1-in-100 years event).

Taking the unavailability of results for the 1-in-100 years event under the +15% streamflow scenario as given, I would suggest using the the losses from the present 1-in-100 years event to calculate a lower bound for the corresponding future event, which would lead to a more realistic (and higher) expected value than the presented value (1.2 million \$).

Subsequently, the authors have done a good job in revising the paper. I would leave the remaining point regarding the expected losses (Figure 13c) to the authors to deal with in a potential editorial process and I would not demand another resubmission for this small point. In other words, I think the paper should be "accepted subject to (very) minor revisions"

We thank the reviewer for the constructive comments. We realized that Figure 13 could be significantly improved if we performed the 1-in-100 years event under the +15% scenario, so we requested additional time to perform these calculations to obtain a more comprehensive loss curve for the historical and future periods. We have modified Figure 13b and 13c to incorporate the Reviewer's suggestions. The manuscript has been modified as follows:

Pg 12, Line 14: “We then calculated expected total losses for the historical period as the integral under the blue curve in (Fig 13c) (\$6.2 million) and expected total losses for the changed climate condition as the integral under the red curve (\$8.6 million) for a total increase in expected losses of 39%. In the future, we plan to repeat this analysis using the full integrated model chain to obtain more realistic values for the changes in streamflow, which would replace the assumed 15% increase in streamflow independent of return period.”

