

## Comment on hess-2021-259

Anonymous Referee #1

---

Referee comment on "How is Baseflow Index (BFI) impacted by water resource management practices?" by John P. Bloomfield et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2021-259-RC1>, 2021

---

The paper with title " How is Baseflow Index (BFI) impacted by water resource management practices" is well written and within scope of HESS. This manuscript highlights the controlling factors for baseflow contribution. It specifically look what is the impact of water resources management practice have on baseflow contribution.

Specific comments:

1. The paper does not go in depth about the different water resources management practices and its relationship with baseflow contribution. Baseflow index calculation itself has uncertainty as it was never verified with any field data. So it would be nice to capture these uncertainties and discuss in the paper.
2. Paper also lacks in discussion about practical implications of the findings of the paper.
3. Figure quality is so poor hard to read the values.
4. Line 135, " Figure 3c.... " there is kind of repetition of same info.
5. Paper needs a bit more explanation about Lin's coefficient. please provide the equation.
6. Somewhere in text it required to give details about different models, e.g Model 1, Model 2 in Figure 5

7. I was very surprised Area of the catchment is not that important for the BFI? any comments

8. Line 409, " in addition ...." why ?

9 Conclusion of this study is bit weak, Need to rewrite.

10. Paper needs some strengthening in Literature.