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Interactive comment on "Downstream prediction using a nonlinear prediction method" *by* N. H. Adenan and M. S. M. Noorani

Anonymous Referee #2

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General comments:

This paper applies Non Linear Prediction in two variants to predict 1 year of daily stream flow in Langat River in Malaysia on the basis of the previous 3 year measured daily stream flow. The experiment presented is clear and well implemented.

From the presented measured and predicted stream flow plots it can be seen that the results for high flows are accurate (which would be relevant for flood risk management applications), while both methods have difficulty with the low flows.

Focus of the paper:

The paper could benefit from a clarification on what is the main aim and contribu-

tion of the work: Comparison of variations of non linear prediction methods (Model I and Model II) (p.14332 l.12-14), or testing for chaotic behaviour of the Langat river (p.14343 l.4), or testing of applicability of non linear prediction method for a case study in Malaysia (p.14335 l.3-4), or contributing to flood risk management in an urban environment through stream flow prediction (p.14333 l.1-12).

For each of the above choices an extended discussion of, and literature review on, the chosen focus would be valuable in the Introduction section.

The Discussion and Conclusion sections could then make a stronger argument whether the intended contribution is achieved.

Specific scientific questions/issues:

Each of the graphs and tables currently presented can be discussed in more detail. For example, from the plotted flow graphs (Fig.6) it can be seen that for the last 2 months model 1 is more accurate in predicting the low-flows than model 2.

The authors conclude that the prediction results of model II are better than those of Model I, because of its slightly higher correlation coefficient (P.14342 l.23-24, and Table II), but the same Table II shows a lower Mean Absolute Error and Root Mean Square Error for model I.

The scatter plots in Fig. 6 have different horizontal and vertical axis, which makes it difficult to compare. The scatter plots are not discussed.