

Interactive comment on “Integrating field and numerical modeling methods for applied urban karst hydrogeology” by J. Epting et al.

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We acknowledge the elaborate review of the anonymous referee #1. We integrated nearly all suggestions into the text (see Paper_Karst_HESS_review_1.doc attached).

The following suggestions we did not include:

- Concerning the title we would rather like to keep it general. Applied concepts and investigation methods are generally applicable. An alternative could be: “Integrating field and numerical modeling methods for the evaluation of evaporite karst evolution and subsidence hazards”. - In the general comment of referee #1 all letters and numbers in the figures seem to be too small. However, within the revised text (Supplement) only the size of letters in Figure 5 are indicated to be too small. Consequently for the

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moment we only adapted the letters in Figure 5 (see file attached).

- p. 3578 / l.6: Groundwater “exfiltration” is a defined term.

- p. 3578 / l.10: Subsidence is not only observed on the dam. At that location caves developed in the subsurface resulting in the subsidence of the whole dam to the East (see Fig. 4).

- p. 3584 / l.4: the term “tectonic settings” we would like to keep.

- p. 3584 / l.28: “Clogging” is a defined term.

- Question referee #1 (p. 3585 / section 2.2): What about an additional upward discharge from the karst aquifer to its base level, the river? Answer: Beneath the dam structure and the river there are no possibilities to measure the discharge from the karst aquifer to its base level, the river. It is assumed, that the chemical composition of groundwater within the karst aquifer beneath the dam structure and the river is in a similar range as in OW4 and at the groundwater outlets. The discharge was calculated quantitatively with the 3-D GWM (see Zone 1, Fig. 5 and Table 2).

- p. 3594 / l. 25: As the unpublished report is not accessible for most readers it was not quoted in the reference list.

- p. 3596 / l.8: “Colmated” has been changed to “clogged” (see above).

Please also note the Supplement to this comment.

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