The author modified the manuscript according to the comments of the reviewers. However, there are still some issues need to be addressed.

## Specific comments:

- 1. I feel that the case study in this research seems a little simple. I still suggest to add more case studies, especially some simulations at catchment scale and comparison with observations.
- 2. I suggests that the author could add more descriptions about the computation efficiency of the new model and MIKE SHE to show the advantage of the new model.
- 3. In Figure 10, from day 6 to day 31, the difference in simulated water tables by MIKE SHE and MOBIDIC-MODFLOW seems not significantly decreased. However, the spatial pattern was changed a lot. This needs further explanation.
- 4. Figure 11, simulated water table depth by MIKE SHE are smooth but the water table depth by MOBIDIC-MODFLOW are not smooth. Please explain it.
- 5. In equation 19, I feel that the meaning of parameter  $\omega$  needs to be further explained. What are the results of the calibration of  $\omega$ ?