We appreciate all the constructive comments by anonymous referee and editors. We have substantially revised the paper and improved the English expression. The responses in detail are listed below.

Q1: About no answering **"**As numerous WRF simulations have been done in Beijing, I have less concerns about the model performance per se; instead, I would encourage the authors to investigate more if the consideration of urban water use could effectively improve the WRF simulations in Beijing"
A: More WRF simulation with and without water usage schemes has been conducted. The results can be seen in Sec. 3.1 (from L244 and Figure8)

Q2: About "Grammatical errors and typos, L166 etc."
A: Revised

Q3: About "(DB11/T353-2014)"
A: It's the regulation number of Requirements for Quality and Operation of City Road Sweeping and Cleaning. A web link was added as a reference. (L105)

Q4 About the question "However, I doubt if such an ensemble is appropriate for this simulation: 1) how did you deal with rainfall? It's highly possible each hour of the 18 years' summer may experience whatever amount of rainfall; so in your ensemble day, it's raining through a day? 2) how did you deal with wind regimes? If southerly and northerly winds with the same speed happened in the same hour, would it end up with a zero wind speed in your ensemble day?"
A: We aim to find out the relationships between water amount and cooling effect from ensemble lateral boundary conditions, rather than to simulate the real cases. We think it is acceptable to do those simulations.
1) on some level, the rain can be regarded as urban water use (or we can say urban water usage can be regarded as rain). Because (1) they have the same physical process once they dropped to the ground in model. (2) road sprinkling always happen, no matter rain or not (according to Quality and Operation of City Road Sweeping and Cleaning). (3) the ensemble rainfall is small

2) Horizontal wind represented by vector (U,V). In your case, it's zero. However, in the ensemble day, (U,V) were averaged monthly and yearly. and the wind direction of Beijing in summer is normally Southeast, and it can hardly be zero in your case.

Q5: About "Even though the 2nd order polynomial regression may appear as so, my actual concern is the applicability of this regression function, which was later used in your optimisation:Apparently, rather than "one point deviates from other points" as you claimed, points with x=0.4, 0.6 and 1.0 deviate from the regression. And the deviation is in fact intriguing: why would the increase in water amount reduce the cooling effect at certain points?Without addressing this concern, the optimisation-related analysis might not be justified."
A: We guess two reasons may case this problem, 1) the randomly process in model's running, 2) road sprinkling to city center was limited in a small area with less water

amount, and the whole effect cannot be determined by cooling of city center (road sprinkling in city center has strong impact on city center, but small uncertainty in rural area has more influence to whole city, that may be the reason why regression of city center was so different once the random processes in the atmosphere happened).

It may better if we do ensemble simulations with different initial conditions and different physical schemes. Or we can exclude the abnormal values. But we didn't do that because 1) actually, the experiments are relatively ideal experiments (mentioned in Q4). 2) For optimal analysis, the past/future relationships between water amount and cooling effect remain uncertain. 3) the main purpose is to construct a method of optimal water use strategies; we show what we get. And we add a discussion about the uncertainties in Sec.3.2 (L324)