A Retrospective Streamflow Ensemble Forecast for an Extreme Hydrologic Event: a Case Study of Hurricane Irene and on the Hudson River basin

General Comments:

The current manuscript presents the uncertainties in hourly streamflow ensemble forecasts for an extreme horological event using a horological model forced with short-range ensemble weather prediction model. Overall, This is very interesting work and a well-done study. I believe the manuscript is written well.

Specific Comments:

- Streamflow forecasts are indeed highly dependent on the meteorogical input and have historically been associated with much uncertainty.

- Summary/discussion states that a higher confidence in the river discharge forecast may be attained within 48 hours of a major rainfall event. This concept isn't new and points back to the uncertainty with hydrologic modeling.

- In terms of what's new that is presented in this work is perhaps using GIS and a regional scale HEC-HMS model but the paper seems to suggest that you are reducing uncertainty. The work seems to suggest that this will enable better flood forecasts but that can't be ascertained unless you are doing hydraulic modeling (HEC-RAS). It is the hydraulic modeling that will translate the hydrology to a given water surface elevation (i.e., flood stage). It is the flood stage that determines the level of riverine inundation. While HEC-HMS can be used for routing, if this work is suggesting better flood forecasting is possible than traditional riverine hydraulic modeling is warranted. I'm a little unfordable with what is being stated for better control of modeling uncertainty with streamflow forecasts unless this work is coupled with simulations in HEC-RAS. Hydrology is more of science and hydraulics more of an engineering discipline. This work is suitable for hydrologic modeling discussions but not "the uncertainties in weather inputs may result in false warnings and missed river flooding events, reducing the potential to effectively mitigate flood damage" (lines 17-19).