1. Please enter the forecast date (YYYYMMDD):

SECTION 1 - OBSERVATIONS

2. Of the flash flood observational datasets, rank from 1-4 (with [1] being the best) how the NWS local storm reports, mPING citizen-scientist reports, USGS streamflow, and SHAVE targeted public observations provide the most useful information about the **areal extent** of flash flooding. If two datasets provided the same information, then assign them the same ranking.

Local storm reports
mPING citizen scientist reports
USGS streamflow
SHAVE targeted public observations

Comments:

3. Of the flash flood observational datasets, rank from 1-4 (with [1] being the best) how the NWS local storm reports, mPING citizen-scientist reports, USGS streamflow, and SHAVE targeted public observations provide the most useful information about the **magnitude** of flash flooding. If two datasets provided the same information, then assign them the same ranking.

Local storm reports
mPING citizen scientist reports
USGS streamflow
SHAVE targeted public observations

Comments:

4. Of the flash flood observational datasets, rank from 1-4 (with [1] being the best) how the NWS local storm reports, mPING citizen-scientist reports, USGS streamflow, and SHAVE targeted public observations provide the most useful information about the **specific impacts** of flash flooding. If two datasets provided the same information, then assign them the same ranking.

Local storm reports
mPING citizen scientist reports
USGS streamflow
SHAVE targeted public observations

Comments:

SECTION 2 – FORECAST TOOLS

5. Of the experimental flash flood monitoring and short-term prediction tools, rank from 1-4 (with [1] being the best) how the MRMS QPE, QPE recurrence intervals, QPE-to-flash flood guidance ratios, and FLASH runoff recurrence intervals **detect the event** (consider hit/miss/false alarm). If two products provided the same information, then assign them the same ranking.

MRMS QPE
QPE recurrence interval
QPE-to-FFG ratio
FLASH runoff recurrence interval

Comments:

6. Of the experimental flash flood monitoring and short-term prediction tools, rank from 1-4 (with [1] being the best) how the MRMS QPE, QPE recurrence intervals, QPE-to-flash flood guidance ratios, and FLASH runoff recurrence intervals **accurately represent the spatial extent** of flooding. If two products provided the same information, then assign them the same ranking.

MRMS QPE
QPE recurrence interval
QPE-to-FFG ratio
FLASH runoff recurrence interval

Comments:

7. Of the experimental flash flood monitoring and short-term prediction tools, rank from 1-4 (with [1] being the best) how the MRMS QPE, QPE recurrence intervals, QPE-to-flash flood guidance ratios, and FLASH runoff recurrence intervals **reveal the magnitude** of flooding. If two products provided the same information, then assign them the same ranking.

MRMS QPE
QPE recurrence interval
QPE-to-FFG ratio
FLASH runoff recurrence interval

Comments:

8. How did the skill of the HRRR-forced FLASH compare to the QPE-forced FLASH? Consider detection, false alarming, spatial accuracy, and magnitude with the forecasts. Mark an [x] next to the appropriate category.

much worse

slightly worse
about same
slightly better
much better

Comments:

9. Assess how much **lead time** was provided from the HRRR-forced FLASH compared to the QPE-forced FLASH. Consider detection, false alarming, spatial accuracy, and magnitude with the forecasts. Mark a [-1] if the HRRR-based products led to a degradation compared to the QPE-based products.

Lead time (minutes):

Comments:

SECTION 3 – WATCHES & WARNINGS

10. Using all available flash flood observations, rate the **spatial accuracy** of the experimental flash flood watches vs. those that were issued operationally. Mark an [x] next to the appropriate category.

much worse
slightly worse
about same
slightly better
much better

Comments:

11. Using all flash flood observations and tools, rate the **uncertainty estimate** that was given to the issued flash flood watches. Recall that a low probability event should occur about 25% of the time, a medium about 50% of the time, and a high about 75% of the time. Mark an [x] next to the appropriate category.

too low
about right
too high

Comments:

12. Using all flash flood observations and tools, rate the **magnitude (nuisance vs. major)** that was given to the issued flash flood watches. Major floods can be validated with reports of homes/buildings with water in them, homes/buildings/vehicles swept away, rescues, evacuations, injuries, or fatalities. Mark an [x] next to the appropriate category.

too low
about right
too high

Comments:

13. Using all available flash flood observations, rate the **spatial accuracy** of the experimental flash flood warnings vs. those that were issued operationally. Mark an [x] next to the appropriate category.

much worse
slightly worse
about same
slightly better
much better

Comments:

14. Using all flash flood observations and tools, rate the **uncertainty estimate** that was given to the issued flash flood warnings. Recall that a low probability event should occur about 25% of the time, a medium about 50% of the time, and a high about 75% of the time. Mark an [x] next to the appropriate category.

too low
about right
too high

Comments:

15. Using all flash flood observations and tools, rate the **magnitude (nuisance vs. major)** that was given to the issued flash flood warnings. Major floods can be validated with reports of homes/buildings with water in them, homes/buildings/vehicles swept away, rescues, evacuations, injuries, or fatalities. Mark an [x] next to the appropriate category.

too low
about right
too high

Comments: