

## Panel 6 Summary

- First must resolve PFHA, and then develop equivalent SSHAC-like process for flooding. Ultimately, using technical output for decision makers to make wise decision.
- Modeling shows that antecedent conditions critical.
- Time dependence can be captured with longer term synthetic models like SEFM (not just a 72-hour period storm event, but a multiday “event” with multiple peaks).
- May need to use different techniques (synthetic storm or flood versus historical data) depending on site and other case-by-case factors.
- Using aerial transposition may be appropriate in certain cases, but has uncertainty.

- What has been modeled does appear to fit even in the extremes (tails) even with small sample sizes.
- Research must be performed to understand the differences between rainfall and flood based modeling.
- Some parameters are bounded (e.g. dry soil and saturated soil), which reduce uncertainty.
- Input data must be questioned, all parameters understood, and uncertainties identified.
- Distributions of input and output must be developed.
- Some models (SEFM) may not be appropriate at larger watershed sizes.
- Move away from single unit hydrograph method, due to better physical modeling based on basin parameters.
- In larger models, operation of water control structures adds to difficulty, but can be modeled. More coordinated watershed approach with all operators and owners involved.