

RMC-RFA Sensitivity Plots

DLS-114, Module 2.20



U.S. ARMY



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Safety Programs

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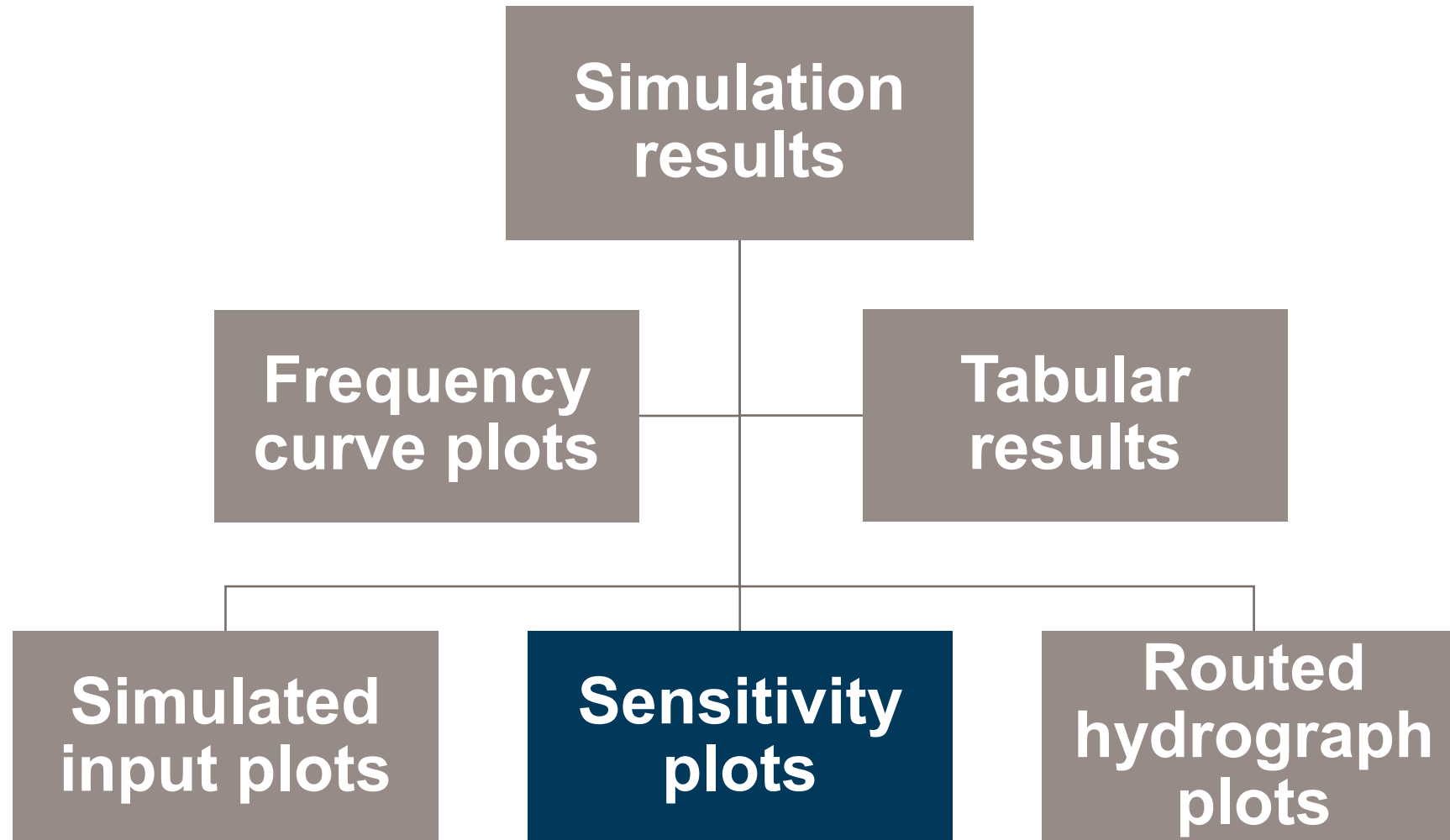
ISABELLA LAKE DAM, CA (SOURCE: HDR)

Learning Objectives

- Discuss sensitivity plots in RMC-RFA
- Introduce correlation coefficients

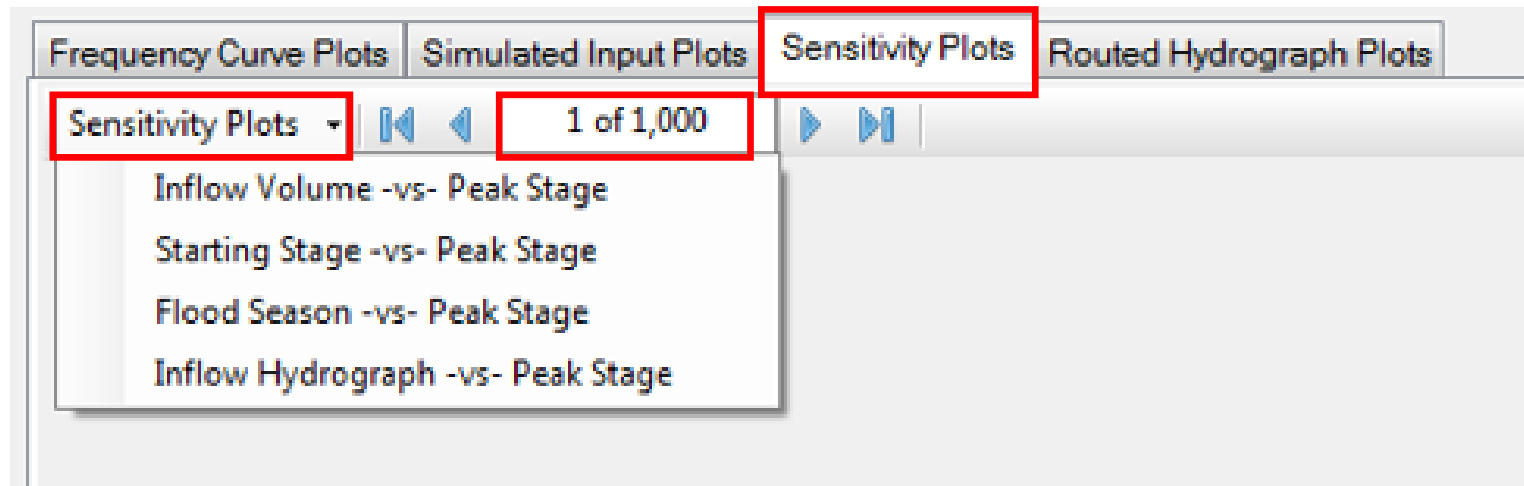


Simulation Results: Sensitivity Plots



Sensitivity Plots

- **Sensitivity plots in RMC-RFA**
 - Inflow volume vs. Peak stage
 - Starting stage vs. Peak stage
 - Flood season vs. Peak stage
 - Inflow hydrograph vs. Peak stage



Correlation Coefficients

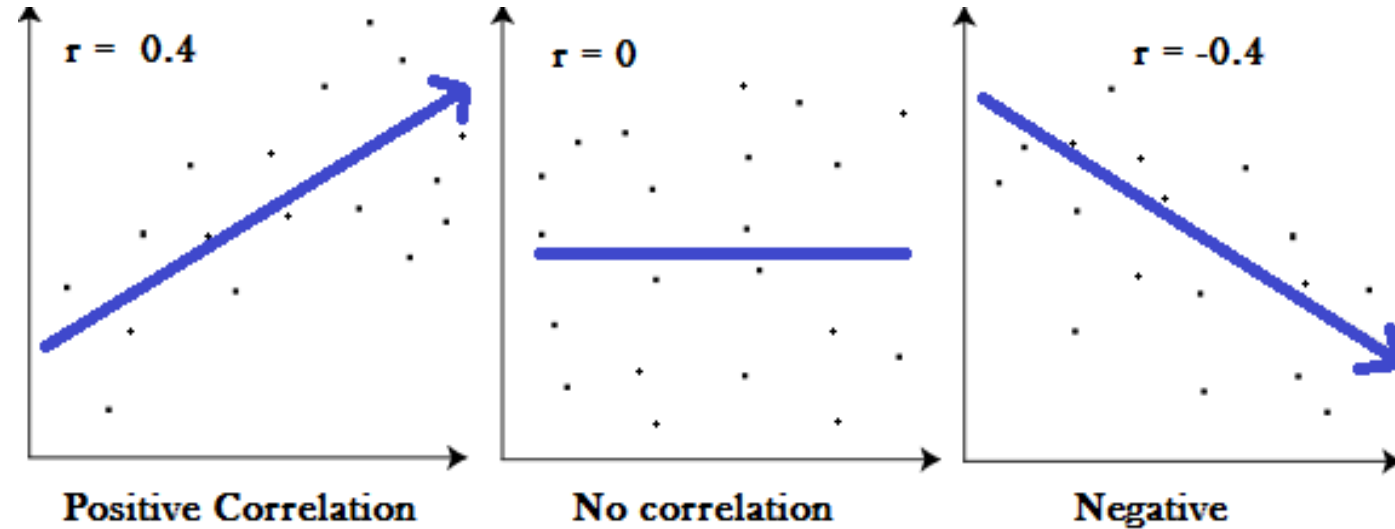
Pearson correlation

- Measure of linear correlation

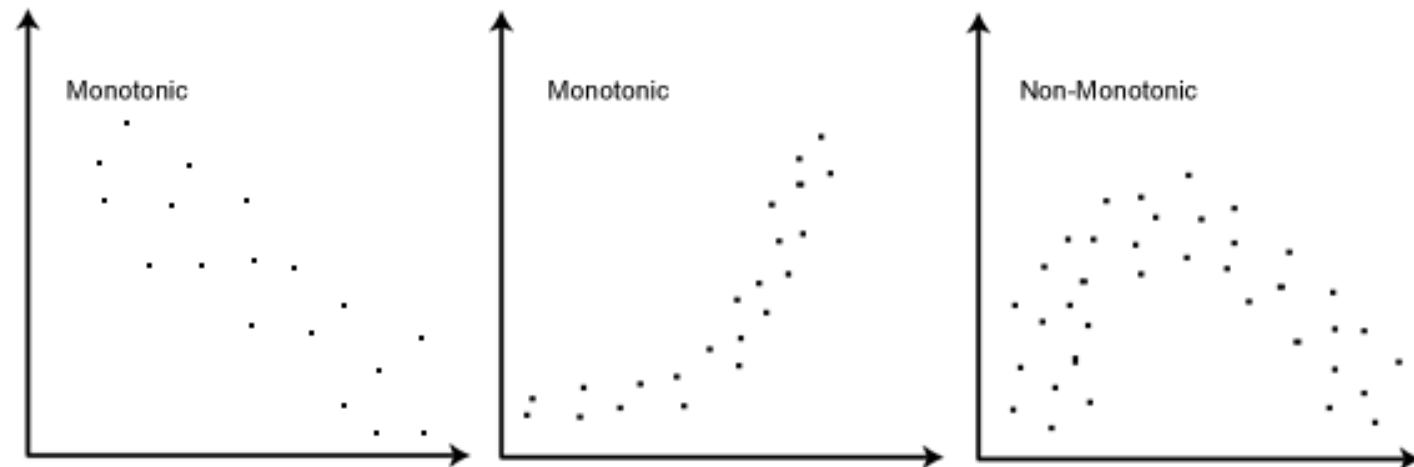
Spearman correlation

- Non-parametric correlation measure

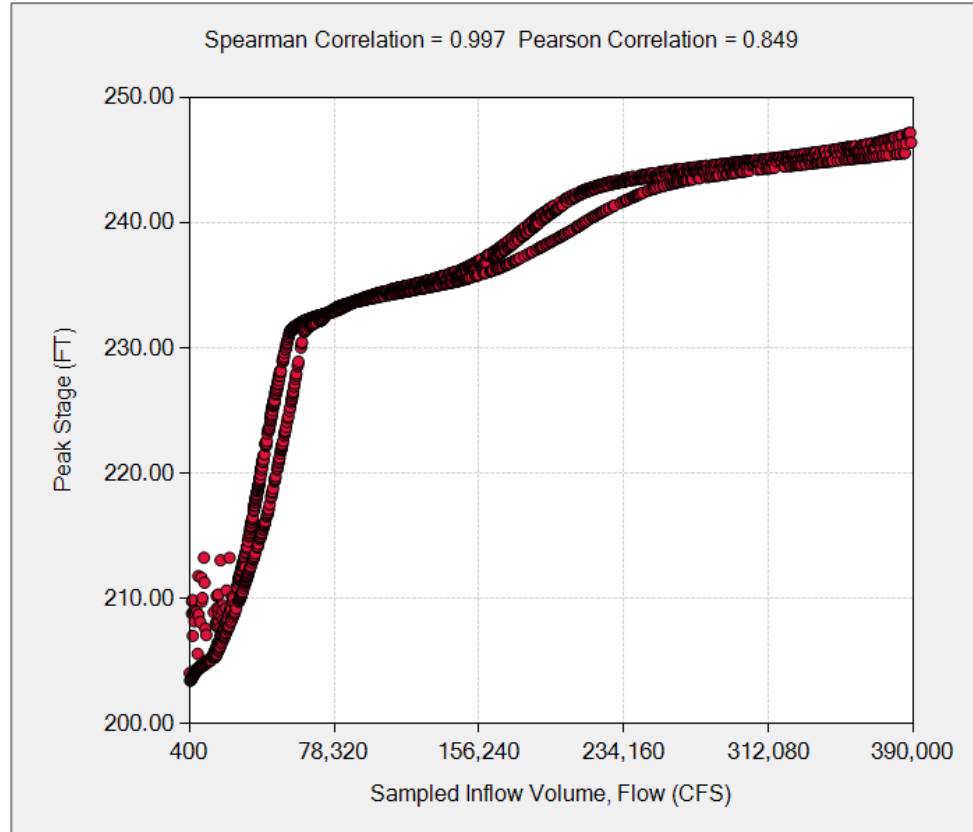
Linear correlation



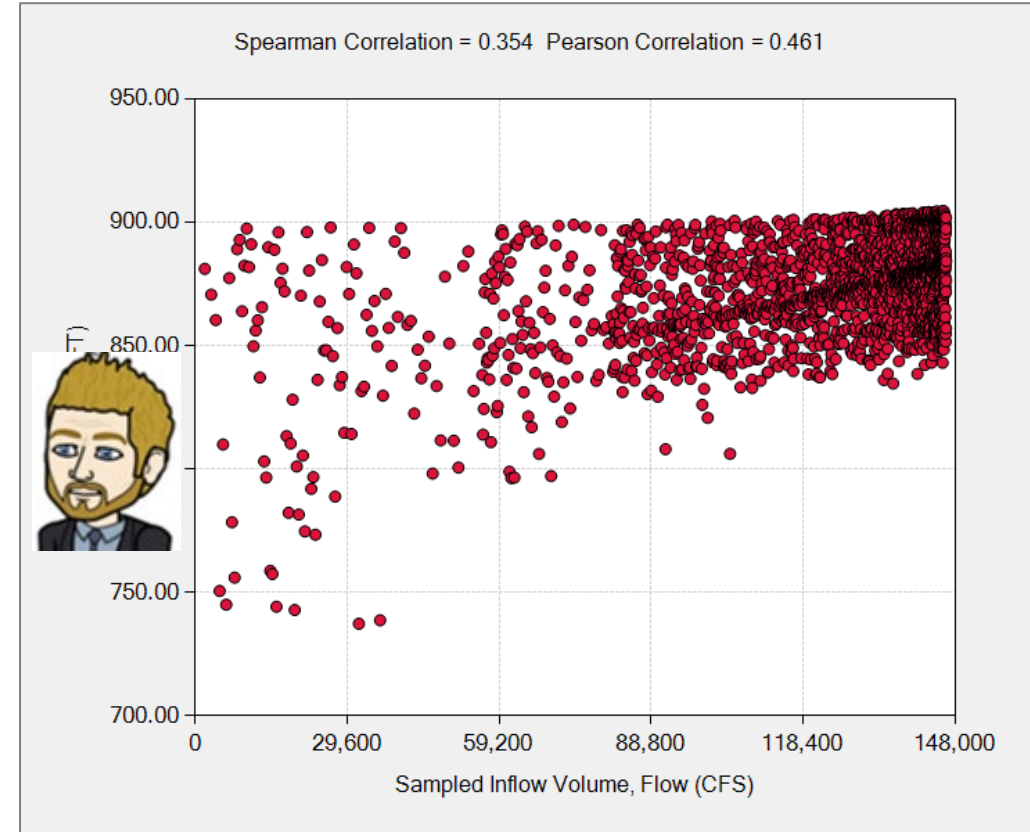
Monotonic function



Sensitivity Plots – Inflow Volume versus Peak Stage

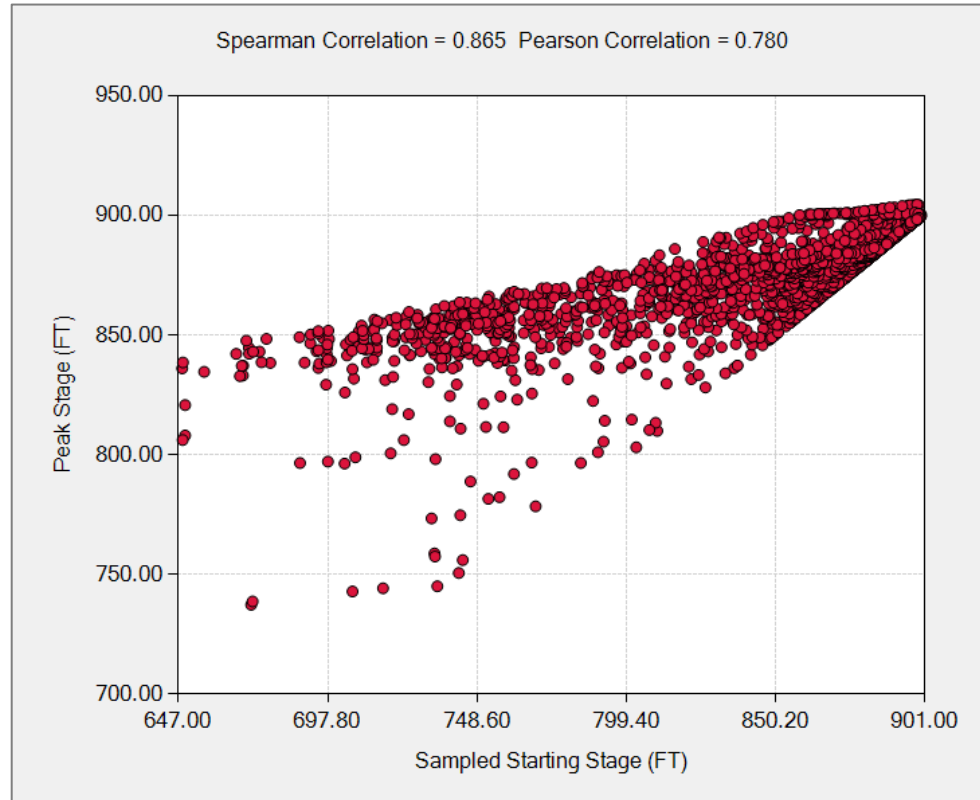


Inflow volume is the primary driver

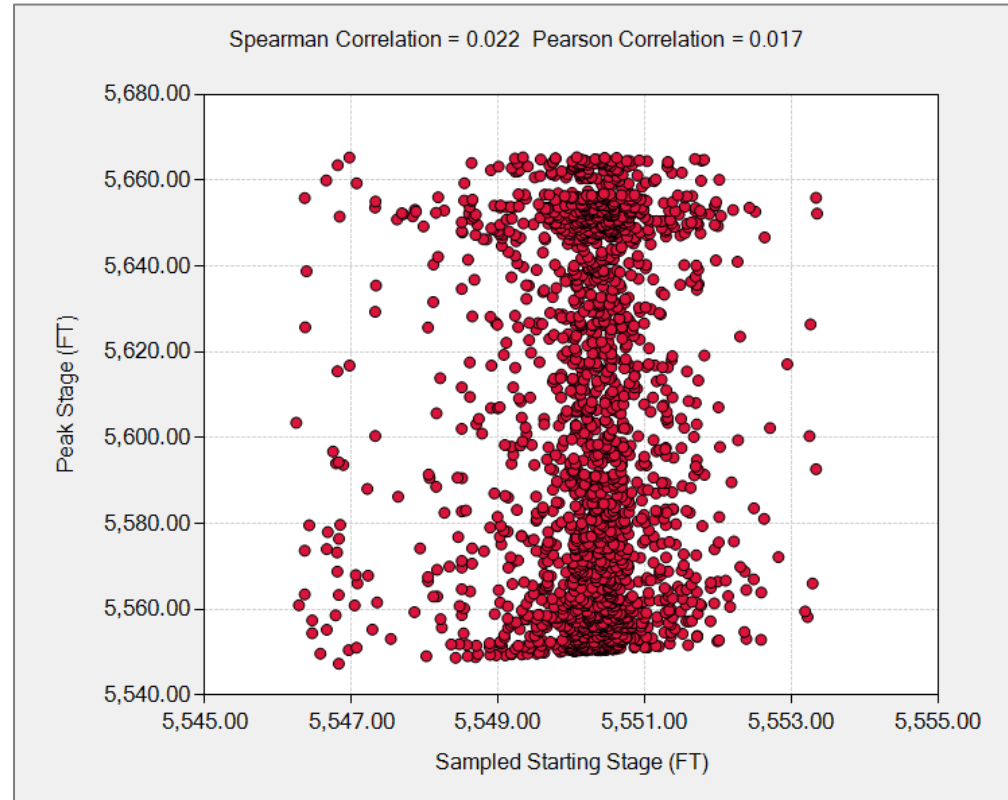


Not the primary driver

Sensitivity Plots – Starting Stage versus Peak Stage

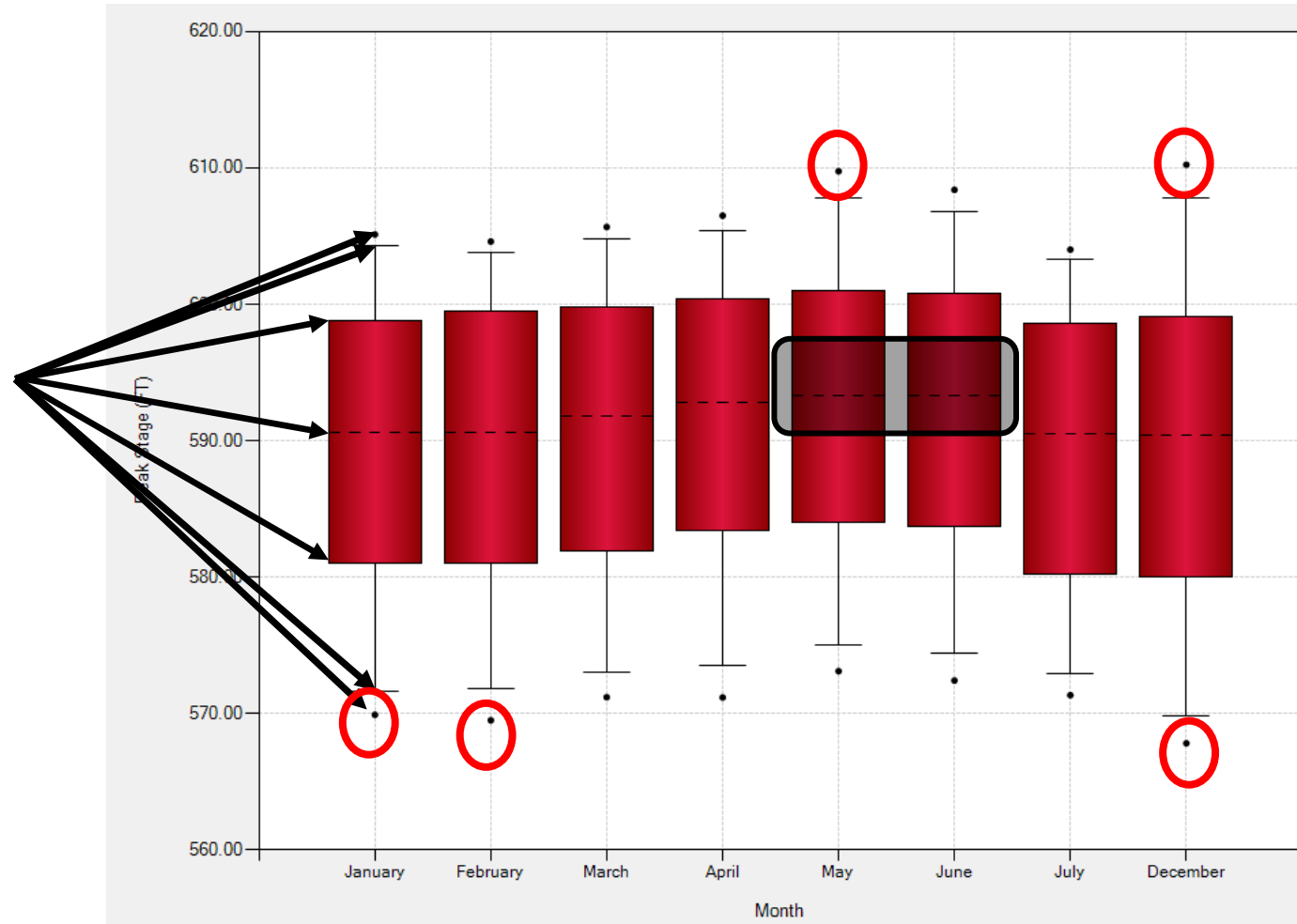


Starting stage is a primary driver

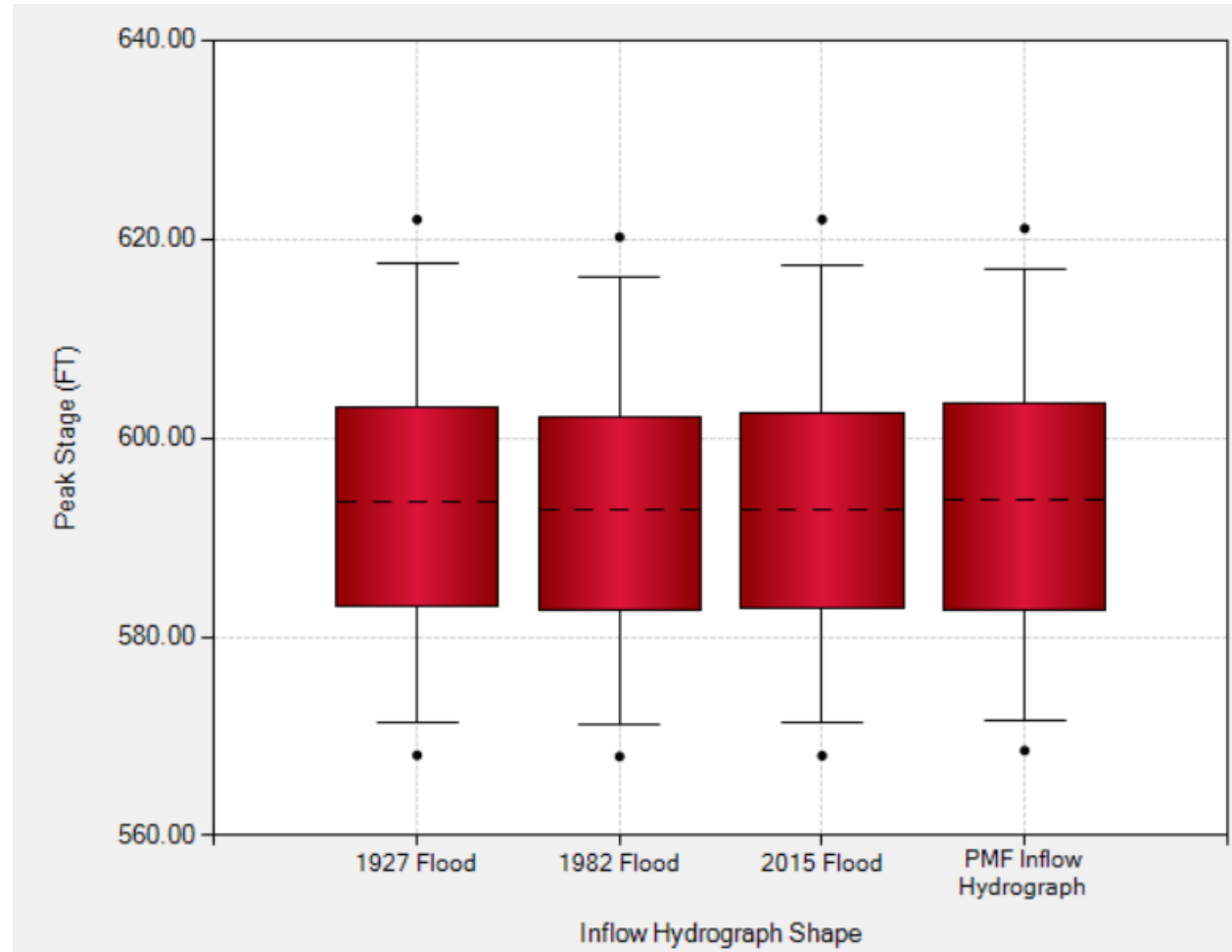


Starting stage is not a primary driver

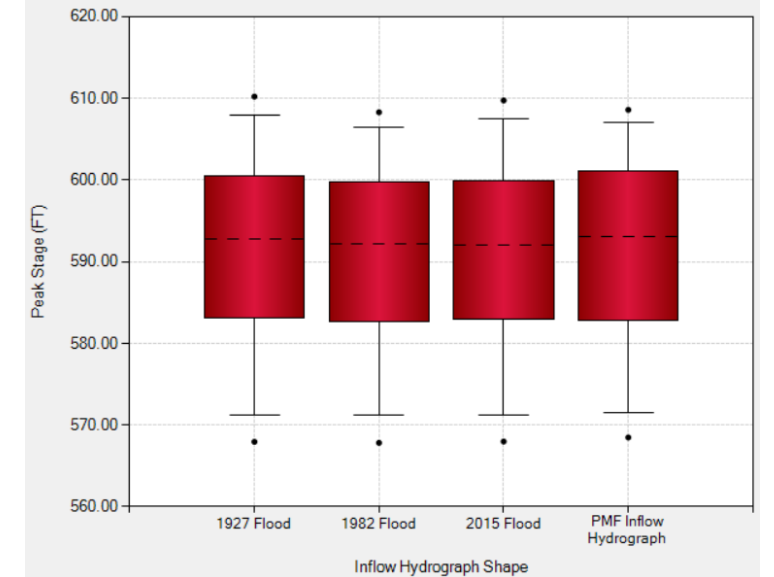
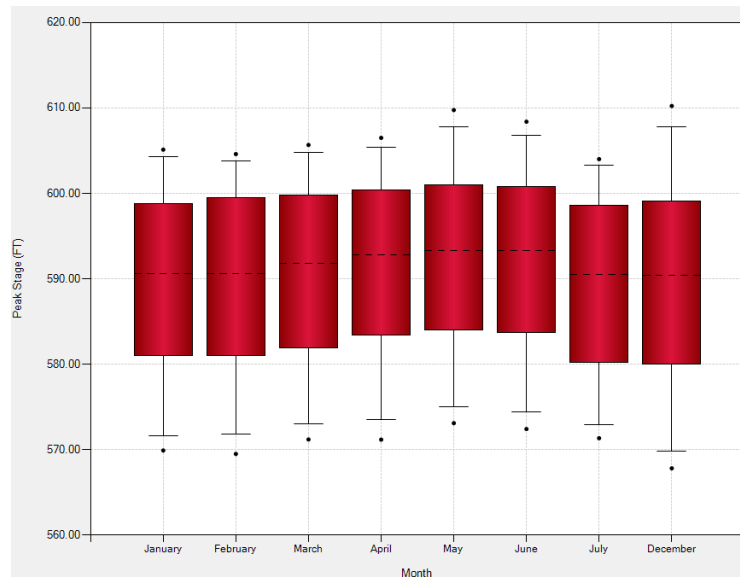
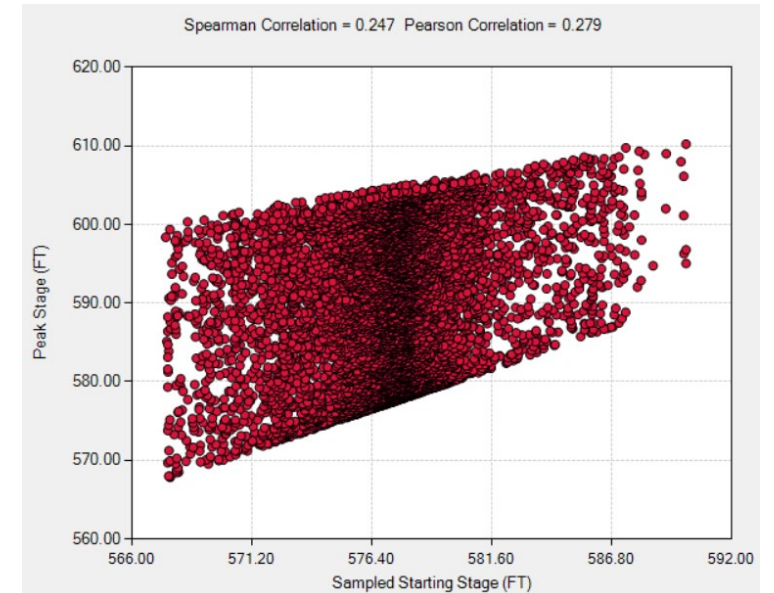
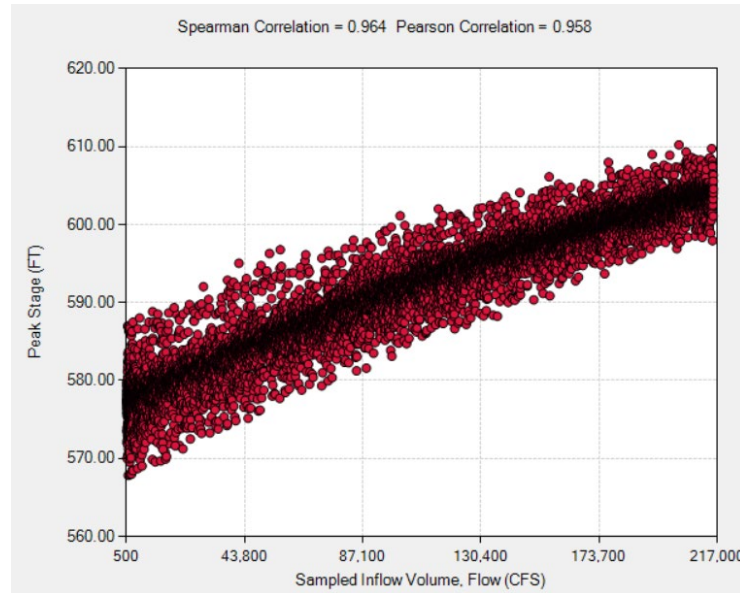
Sensitivity Plots – Flood Season versus Peak Stage



Sensitivity Plots – Hydrograph versus Peak Stage



Sensitivity Plots – Blakeley Mountain Dam Example



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? Questions

