



How Six Recent Extreme Pacific Northwest Storms Compare to Historical Storms in HMR 57

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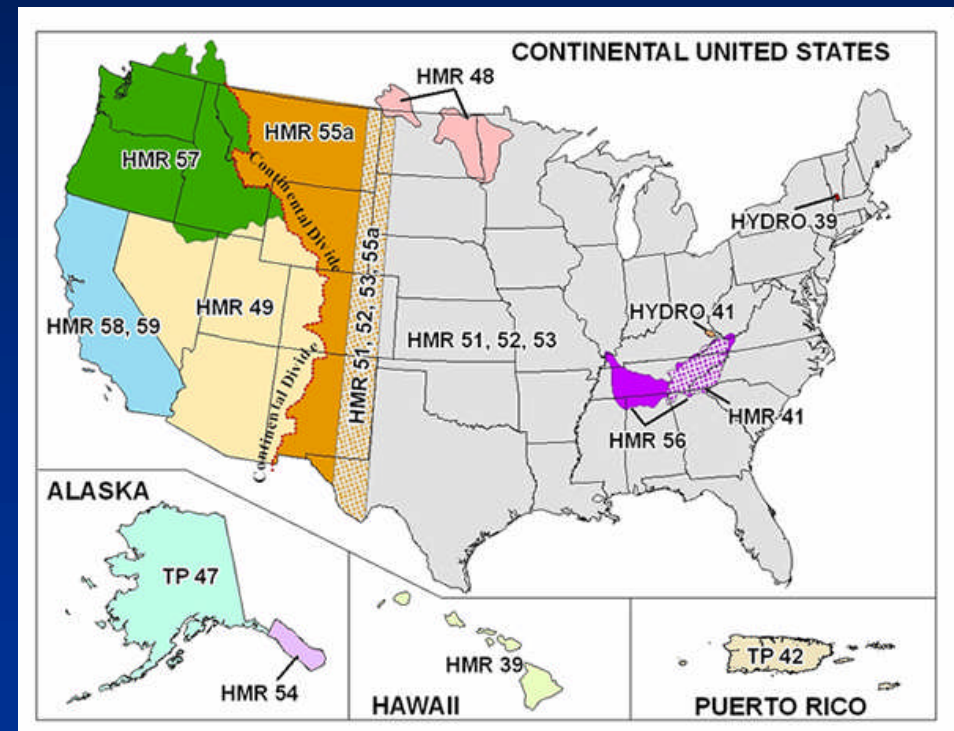
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2009 ASDSO West Regional Conference * Coeur d'Alane, ID * 4-7 May 2009



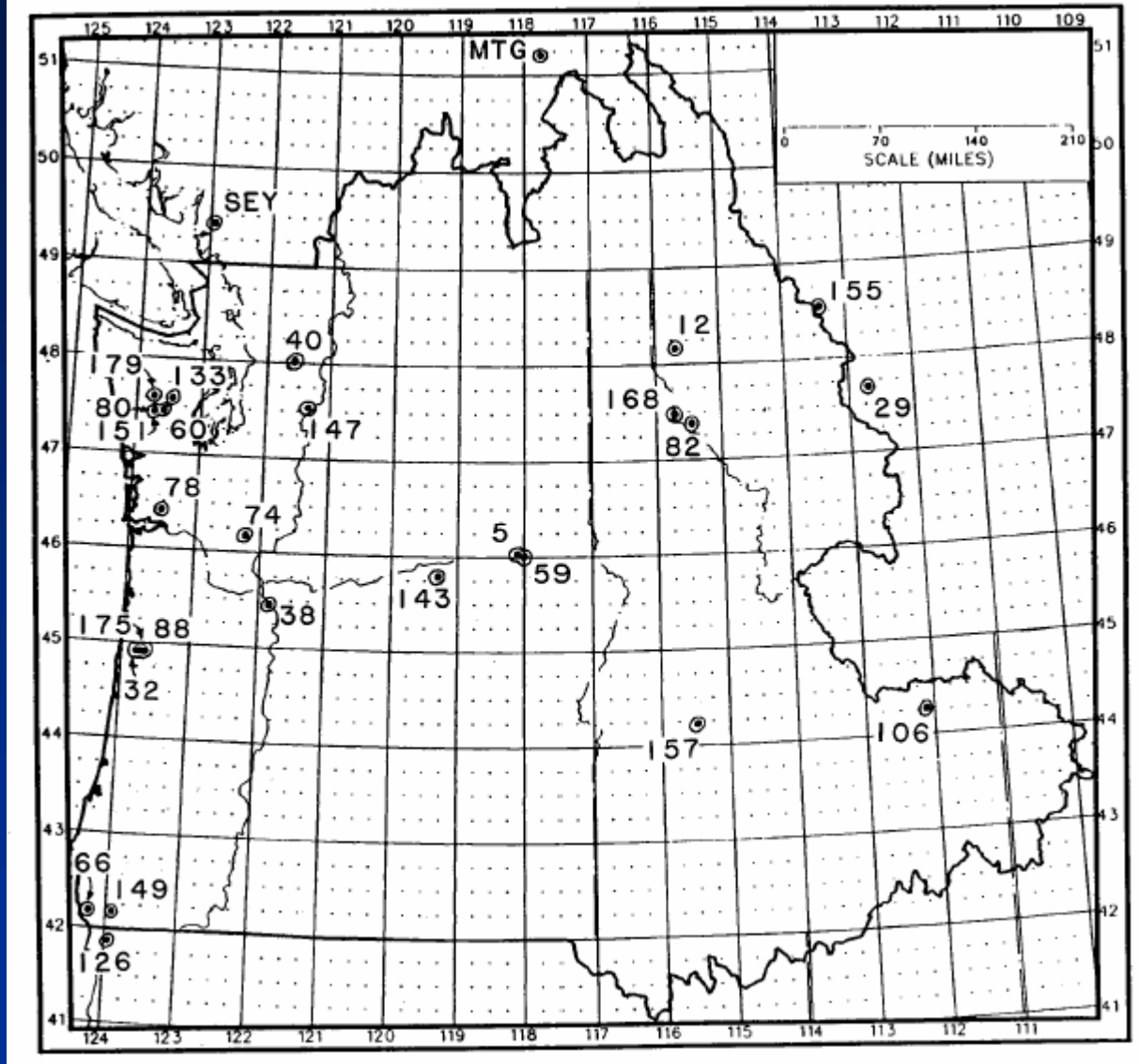
Hydrometeorological Report 57 (HMR57)

- Probable Maximum Precipitation - Pacific Northwest States. Columbia River, Snake River and Pacific Coastal Drainages, Oct. 1994
- Based on storm analyses from 1900 through 1980.



General vs. Local Storms

The analysis of major storms for the Northwest states is an important part of deriving PMP estimates. The process of analysis involves collecting rainfall data from available sources; applying quality control that verifies outliers and deals with missing data; and compiling the data into a format for automated processing. Along with this step, a parallel effort is made to prepare a synoptic weather analysis. This analysis is important in understanding the timing of rainfall and in defining the storm's precipitation pattern. Synoptic discussions have been completed for some of the 30 storms listed in Table 2.1. These discussions cover the surface and upper-air features, the precipitation (including snow), and the dew point and/or temperatures pertinent to the storm. Excerpts from the complete synoptic analyses made for these storms are provided in Appendix 2 of this report.



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MR 43 relied on a very
itation-to-moisture ratio

Figure 2.2.--Distribution of the extreme storms considered in this study (see Table 2.1 for identification).

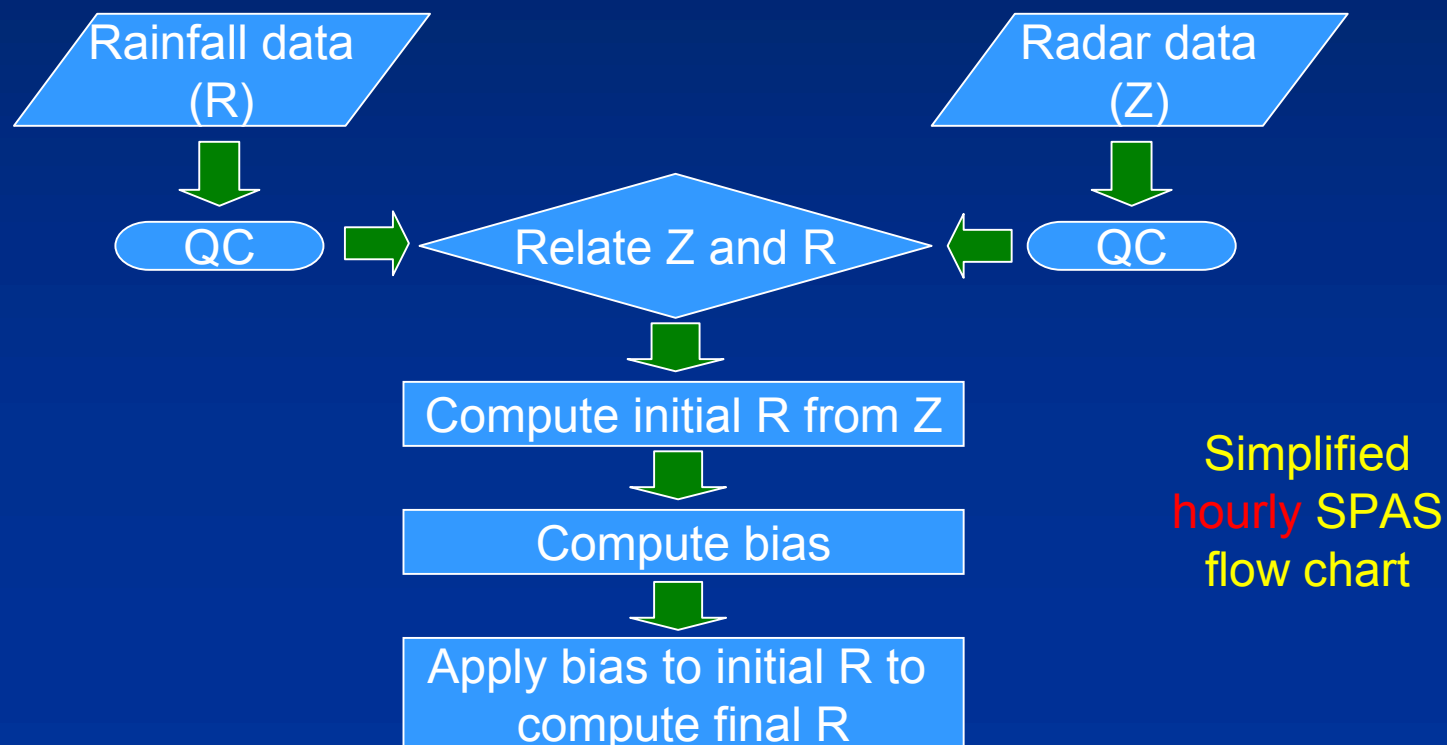


Sample HMR 57 Storm Analysis

- *Pertinent Data Sheet*

Storm Precipitation Analysis System (SPAS)

- Complete storm analysis software program
 - Initially motivated to analyze extreme storms and compute Depth-Area-Duration (DAD) tables for Probable Maximum Precipitation (PMP) studies, but **also used to create rainfall input for hydrologic models**



Take Home Messages

- Since 1980, several important extreme events have occurred in the Pacific Northwest and until now have gone unanalyzed.
- SPAS has the capability to develop accurate DADs in complex terrain.
- **THANK YOU! For more information contact:**

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