

Rating Curves for Flood Detection

Real-time precipitation and stream stage data are important building blocks of a flood detection system. Once installed, they provide valuable data to decision support systems used by meteorologists, hydrologists, flood responders and floodplain managers. But how do we relate the stage measured at a stream gauge to the flood threat to the community and an appropriate response? The answer is found in the stage/discharge rating curve.

Most experienced hydrologic warning community professionals understand the importance of rating curves. The purpose of this presentation is to identify some often overlooked aspects of stage/discharge rating curves and their development including:

- The need for rating curves,
- Rating curve basics,
- Simple rating curve solutions,
- Matching the effort to the need,
- Advanced rating curve applications,
- Enhanced flood detection/response.

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Cory is an Arizona registered professional engineer. Cory earned his masters of science in engineering in Flagstaff, Arizona in 2004. Since then Cory has served as a hydrologist for projects in Arizona, Nevada, Utah, and New Mexico. He has performed storm forensic studies, rating curve analyses, stream flow discharge measurements, and has been involved in numerous ALERT system planning, design, installation, operations and maintenance projects.