

Spillway Chute Joints – the Devil is in the Details

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Joints are a critical element in concrete spillway chute design, and can render an otherwise sound chute design defenseless against the persistent attack from spillway flows. This presentation will focus on various aspects of chute joints and their importance, including:

- Examples of spillway chute failures
- Sample potential failure mode event trees initiated at spillway chute joints
- Studies by the Bureau of Reclamation that quantify potential uplift pressures and seepage flow from offset and open joints
- The where and why of different types of joints; joint spacing
- Various types of waterstop (PVC, hydrophilic, post-construction injection grouting, etc)
- Effectively illustrating waterstop installation on construction drawings
- Keyways
- Round dowels vs square dowels; greased dowels vs dowel sleeves
- Anchors
- Drainage beneath slabs and at joints
- Drainage Outlets
- Drainage insulation
- Sealant or not?
- Concrete overlays
- Aeration Slots/ramps