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My Crystal Ball

This is my 50th year of engineering practice, most of which has involved the planning, investigation, design, construction, operation, and safety of dams and appurtenant works. If accepted, my presentation would be my view of the future of dam safety -- looking into my crystal ball.

Looking back

To look ahead, I first would describe my experiences as a young engineer during The Golden Age of dam building. [This would build on part of an invited presentation I gave at USSD In 2008 when I was asked for my opinions about how to bridge the gaps in the body of knowledge between todays practicing engineers and the veterans of the Golden Age.] Today This is the Dams are Bad Age, at least in the United States. The opportunities to follow work from planning through construction are limited. I will explain how I believe that the lack of design and construction experience reduces understanding of dam safety.

My Crystal Ball

If for no other reason, water supply is a global issue that must contemplate new dam construction, bringing in to focus the gaps in the body of knowledge between todays practicing engineers and the veterans of the Golden Age. The most important element of dam safety in my crystal ball is the development of appropriate techniques for risk management. Initiatives that I believe will be important to dam safety are:

- Bridging the knowledge gap
- Understanding how uncertainties, both epistemic and aleatory, affect risk
- Understanding how human factors lie at the heart of most dam safety problems
- Incorporating how the role of judgment is critical
- Incorporating why societal perceptions of risk are important I will briefly discuss some possible ways to accomplish these initiatives.