My How You (Dam Instrumentation) Have Changed!

Robert Saber, P.E., Gannett Fleming, Inc.
Christopher Bailey, P.E., Gannett Fleming, Inc.
E.J. Barben, Gannett Fleming, Inc.

Dam instrumentation and monitoring have changed significantly over the last 30 years. The types of instruments, construction details, and methods for data collection have evolved. Vibrating wire piezometers were at the time relatively new and unproven but have since become commonplace. Data acquisition was almost always accomplished by manually observing each instrument; now there are multiple options of automated data collection available to owners. Similarly, instrumentation installation methods have evolved, although some may argue regressed. This presentation will look back at different dam projects over the last 30 years to present the changes and trends in instrumentation that have been observed. Instrumentation performance will also be reviewed using case studies of paired pneumatic and vibrating wire piezometers. Lessons learned from the author’s perspective will be shared to help others have successful dam instrumentation programs.