ABSTRACT

The AmerenUE Taum Sauk Pumped Storage Plant began operating in 1963 to store excess electric power generated at night for use during periods of peak demand in the daytime. The 1.5 billion gallon upper reservoir failed catastrophically during the early morning hours Dec 14, 2005 due to a combination of instrumentation failure, human error, and design/construction deficiencies. The resulting flood sent a torrent of water down the side of Proffit Mountain, stripping away thousands of tons of soil and rock along with thousands of trees from the mountainside. For 12 minutes, an average flow of around 280,000 cfs roared down the mountain, scouring down to bedrock. The massive flood of then swept through Johnson’s Shut-ins State Park, causing extensive damage and deposition of debris throughout the park, changing the landscape forever. Amazingly, no lives were lost.

The campground at Johnson’s Shut-ins State Park was destroyed by a 20 foot wall of water and debris that roared through, devastating the area just upstream of the shut-ins. All but a few facilities in this part of the park were completely destroyed and covered by trees, soil, and rock along with concrete, rebar, and liner from the failed reservoir. Had the campground and shut-ins been at capacity during a popular summer weekend, the death toll could have been enormous.

After tearing through the campground, the flood roared through the shut-ins, depositing large trees 40 feet above the channel. Luckily there was no one in the gorge as those caught in the flood likely wouldn’t have survived.