Lake Murray Backup Dam

For almost three years, the building of the backup dam at Lake Murray was the largest active dam construction project in the United States. Built at the request of the Federal Energy Regulatory Commission, the $275 million structure was designed to provide flood protection to more than 135,000 people living downstream in the event an earthquake damages the original Lake Murray dam.

•Construction of the backup dam began in 2003 and ended in 2005.

•The backup dam spans 1.5 miles and rises 200 feet at its peak. At its base, the dam is 160 feet wide and at its crest, only 20 feet wide.

•The backup dam is constructed of 1.3 million cubic yards of concrete – that's more concrete than exists in all of SCE&G's other power plants, including the V.C. Summer Nuclear Station.

•The concrete center section of the dam weighs 5.1 billion pounds. That's equivalent to 320 million 16-pound bowling balls, enough to encircle the earth almost twice if laid out in a line.

•The crews building the backup dam logged 1.7 million man hours.

•The backup dam was built following a mid-1990s analysis of the 1886 Charleston earthquake. Experts, estimating the magnitude at a 7.3 on the Richter scale, determined the original Lake Murray dam would be vulnerable to wide-scale embankment liquefaction in the event of major earthquake.

•The original Lake Murray dam was designed and built in the 1920s. The Charleston earthquake was also used as a benchmark in the design process, however, at that time, the earthquake was believed to have been closer to a 6.5 on the Richter scale. That estimate was later revised to a 7.3, which was used in the design of the backup dam.

For more information on Lake Murray, visit http://www.sceg.com/en/my-community/lake-murray/.