

Geologists to map new fault near Truckee

Barbara Barte Osborn, Sacramento Bee, 11-19-09

Geologists from two national engineering firms will begin mapping the recently identified Polaris earthquake fault near Truckee.

Martis Creek Dam – plagued by seepage as well as the fault – has been deemed one of the riskiest of the U.S. Army Corps of Engineers' 610 dams nationwide and is the subject of a long-term study and remedial efforts.

Kleinfelder and AMEC-Geomatrix will be paid \$250,000 for their part of the continuing study of the dam in Martis Valley, which lies between Truckee and North Lake Tahoe.

"Seismically, it's very active up there," said Ronn Rose, a corps geologist and dam safety program manager for the corps' Sacramento district.

Discovery of the fault, in which Rose had a part, is "exciting for the geology community," he said. "It's not common that you find a brand-new fault."

The fault is about 21 miles long, extending from a few miles south of the Northstar-at-Tahoe ski resort northward into the Sierra Valley near Loyalton, Rose said. It has been recently active – geologically speaking – "probably within the last 11,000 years," he added.

In a conference this summer, a corps presentation included a 2008 U.S. Geological Survey calculation that the Polaris fault "may be capable of a 6.9 event."

More mapping and trenching are needed to determine the exact length of the fault and whether it is linked to other known faults, Rose said.

"The longer the fault, the larger the earthquake that could occur," he said.

Maps expected to be ready by next spring or summer will help determine sites for future trenching and information-gathering.

Seepage at the dam is less of a concern, he said, as "it's for flood protection and we don't store a lot of water behind it."

By 2014 the corps expects to determine what should be done about the dam – "from leaving it as is, to removing it, to new construction," said Adam Riley of the corps' Civil Works Project Management office.

He said construction could begin in 2019 if that option is chosen.