

Road Mapping and Implementing an Enduring LANL Seismic Hazards Program

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Since completion of the previous update to the Los Alamos National Laboratory (LANL) Probabilistic Seismic Hazards Analysis (PSHA), an enduring, long term seismic hazards geologic investigations program has been developed and formalized. This robust program seeks to complete discrete projects aimed at uncertainty reduction in the factors which contribute to various aspects of hazard calculations, following recommendations and prioritization by the previous PSHA study. The recommendations made in the previous PSHA update create the foundation of guidance documents that determine project prioritization within the LANL seismic hazards geologic investigations program. Program leadership and a technical steering committee then implement these projects, and track them to evaluate progress. Technical projects included a wide variety of geologic and geophysical investigations, including paleoseismic trenching campaigns and remote sensing efforts, the re-examination of Kappa along with 3d site response, to improved broadband seismic instrumentation coverage and monitoring of the greater Los Alamos region, and an overarching sensitivity study. Furthermore, efforts to prepare for efficient and effective forthcoming PSHA update execution were also completed. As LANL approaches the launch of its PSHA update, we highlight our methods for road mapping an enduring program, implementing this program, and discuss some project results that contributed to the reduction of uncertainties.