GEOMORPHIC SETTING OF ARCHAEOLOGICAL SITES AND TIMING OF RECENT EOLIAN EVENTS ON THE PAJARITO PLATEAU, NEW MEXICO

Paul G. Drakos\textsuperscript{1} and Steven L. Reneau\textsuperscript{2}

\textsuperscript{1}Glorieta Geosciences, Inc., 1723 Second St., Santa Fe, NM, 87505
\textsuperscript{2}Los Alamos National Laboratory, EES-9, MS D462, Los Alamos, NM, 87545

Five Coalition Period to Classic Period Ancestral Puebloan sites were investigated on Pajarito Plateau mesa tops north of Los Alamos Canyon and in the Cañada del Buey watershed. Stratigraphic relationships, thickness of deposits burying sites, and soil characteristics provide a context for determining the relative age of sites and recent geomorphic history. Puebloan sites are partially buried, primarily by eolian deposits, and are underlain by 0-1.5 m of Pleistocene and Holocene deposits overlying the Bandelier Tuff. Pre-Puebloan deposits include a sequence of discontinuous, truncated soils that are inferred to represent episodic eolian deposition and soil formation followed by erosion in the mid Pleistocene, late Pleistocene, early Holocene, and mid Holocene. Puebloan sites include three Coalition Period roomblocks or multicomponent sites, a Classic Period field house, and a Classic Period grid garden site. The roomblock sites are buried by colluvium, derived in part from erosion of the roomblocks, and eolian sediment. It is inferred that 15 to 20 cm of eolian deposition occurred sometime after the Middle Coalition Period but prior to the Classic Period; ca. 1250 to 1325 AD. A more recent eolian event occurred after abandonment of the early Classic Period sites, resulting in deposition of an additional 5 to 10 cm of eolian sediment in the last 600 years. After abandonment, the roomblocks acted as effective traps of eolian sediment, enhancing local deposition rates and site preservation. Animal burrowing also appears more active in the roomblocks, which may also help enhance local colluvial transport rates.