

CONSERVATION Showcase

Soil Information Aids Albuquerque

The City of Albuquerque's Planning Department is charged with the responsibility to ensure the public's health, safety, and welfare. Recently, before permits were issued to a new subdivision they turned to the soil scientists of NRCS to achieve this goal.

Albuquerque, like several sites in New Mexico, is built on certain areas that have collapsible soils. Collapsible soils are created when an alluvial fan is first deposited. The sand and clay particles may be loosely deposited and fused together by carbonates. These collapsible layers can be any depth, ranging from a foot thick to several feet thick. When these layers get wet, the carbonates bonding the soil particles can break down and the soils will collapse – creating visible fractures or depressions in the soil.

The results of collapsible soils can be seen in sink holes in local streets and parking lots, and visible cracks in building foundations and walls of houses. In a city this can occur because of over watering lawns and gardens, and ponding of water that will penetrate deeper into the soil than what had happened prior to urban development.

The City of Albuquerque recently contacted the soil scientists of NRCS to do an onsite investigation of an area where there would be new housing development. Clarence Chavez, soil scientist, toured the site and was able to advise the city of several findings.



Upon walking the perimeter of the new subdivision it was noted that there was moderate evidence of collapsible soils. The best evidence was in the water holding pond on site. The north end of the pond was starting to show fractures and collapsing on two sides. Local streets also showed evidence of being wavy - collapsing and cracking. Homes in the area showed cracking walls, wavy rooflines, and dips.

Given the evidence identified, NRCS New Mexico was able to provide the City of Albuquerque sound information that its planners could use in carrying out their responsibilities to the public.

Identification of collapsible soils is just one soil issue that sound soil information can address. For more information about collapsible soils and other soil related information see www.nm.nrcs.usda.gov