

geographic features including the San Joaquin River. Many of those names remain in use today. The names "Salado" and "Salado Creek," for example, are attached to a variety of features and places, both natural and man-made.

As shown on the two official United States Geological Survey (USGS) maps that cover the proposed viticultural area, the Patterson and Crows Landing quadrangles, Salado Creek is an intermittent stream that flows east from the higher elevations of the Diablo Mountains. After passing under Interstate 5, Salado Creek turns and flows north through the proposed viticultural area. After leaving the proposed area, the creek runs west and north of Patterson.

The Patterson quadrangle map shows Little Salado Creek running east from the Diablo Mountains to the southern tip of the proposed viticultural area, where Interstate 5 and the California Aqueduct interrupt its natural channel. On the Crows Landing map, the creek is shown to resume southeast of the proposed area where it runs northeast from the Delta-Mendota Canal. The Salado Sub-Station is shown beside the California Aqueduct within the proposed area's boundaries.

The petition also notes that the Salado Creek Ranch, known for its walnuts, is within the proposed boundary area. It adds that Salado Avenue in Patterson is a major street that passes the town's post office, its branch library, a new school, and the city council's chambers. The petition also states that the local irrigation district was previously known as the Salado Irrigation District.

The petition explains that Salado Creek is best known to local residents for its floods. "Salado Creek History," an article published in "The Gateway: A Patterson Township History Society Bulletin" in December 1996, discusses the creek's significant floods. As noted in the article, the March 4, 1938, edition of the local Patterson Irrigator newspaper states that Salado Creek spilled over its banks and onto State Highway 33 on Patterson's east side. The article adds that a flood in November of 1938 spilled into a local nursery.

#### *Boundary Evidence*

The petitioner explains that water from Salado Creek and Little Salado Creek has deposited large quantities of sediment on the flood plain and formed an alluvial fan. Further, these sediments are the parent material for the Ensalado soil series, which the petition states are unique to western Stanislaus County. The petitioner emphasizes that the

proposed Salado Creek viticultural area boundaries, which are on this alluvial fan, generally coincide with the extent of the Ensalado soil series.

#### *Growing Conditions*

##### *Topography*

The proposed Salado Creek viticultural area lies on the western side of the San Joaquin Valley at the foot of the Diablo Mountains, which are part of California's Coast Range. The proposed area, which is between 125 and 340 feet above sea level as noted on the USGS maps, is generally flat, with a gentle downward slope to the northeast towards the San Joaquin River. A number of man-made canals, ditches, and drains cross the proposed viticultural area. The California Aqueduct and the Delta-Mendota Canal, for example, flow from the northwest to the southeast across the proposed Salado Creek viticultural area.

Salado Creek is the major natural watercourse in the proposed viticultural area. An intermittent stream, it begins in the Diablo Mountain Range to the area's west and runs east in its natural channel from the mountains to the California Aqueduct. After crossing the Aqueduct at the foot of the Diablos, the creek flows north and then northeasterly across the gently sloping floor of the San Joaquin Valley. After crossing the Delta-Mendota Canal in a flume, it enters a man-made channel that carries it north out of the proposed viticultural area and then east around the heart of Patterson. According to the petition, Salado Creek then enters large drainpipes at State Route 33, which take its water to the San Joaquin River.

Another intermittent stream, Little Salado Creek, starts in the Diablo range south of Salado Creek. It meanders east in its natural channel to the southern tip of the proposed boundary area at Interstate 5 and Fink Road. The creek then enters a series of man-made drains and channels as it flows northeast across the valley floor outside of the proposed area south of Patterson.

The petition states that the proposed area covers the upper portion and back slope of the alluvial fan created by Salado and Little Salado Creeks. The two creeks created the fan as they left the steep slopes of the Diablo Mountains and their flow velocity diminished as they entered the much gentler slopes of the San Joaquin Valley. This drop in velocity allowed the coarser, heavier sediments to settle out and formed the creeks' alluvial fan at the foot of the Diablos. The two streams carried finer, lighter sediments further downstream to the flood plain of the San Joaquin River.

The coarser, heavier sediments of the alluvial fan became the parent material for the Ensalado soils found in the proposed viticultural area.

##### *Soils*

The Ensalado series soils, formerly known as the Salado series, are unique to west Stanislaus County, California, according to a 2001 publication by soil scientist, vineyard consultant, and Salado Creek petition author Stan Grant. He further notes that this soil series occurs only along three streams in the area, Salado, Orestimba, and Del Puerto Creeks, and accounts for only 0.17 percent of the soils covering western Stanislaus County. Grant notes in the petition that because of their lower flow velocity, Salado Creek and Little Salado Creek dropped large quantities of sediment immediately after leaving the Diablo Mountains. This produced the large alluvial fan upon which the proposed viticultural area sits. The petition adds that Orestimba and Del Puerto Creeks, with their higher flow rates, took their sediments further to the east, producing smaller alluvial fans at the foot of the mountains.

The petition explains that the Ensalado soils are very deep, with a root depth of 60 inches or more. They are well drained, with parent material from sandstone and shale, and have little organic matter. The petition adds that they have little layer development due to the dry, warm climate, and are calcareous. The petition notes that the soils lack of layering results in soil properties that are generally consistent with depth, including water permeability and soil moisture. Classified as coarse-loamy, this soil generally consists of a thin layer of fine sandy loam over deep loam subsoil. According to the petition, other soils on the alluvial fan are older than the Ensalado soils and lie beyond the courses of Salado and Little Salado Creeks.

##### *Climate*

The proposed Salado Creek viticultural area lies on the west side of the San Joaquin Valley at the foot of the Diablo Mountain range. These Coast Range mountains shield the proposed viticultural area from the maritime influences of the Pacific Ocean. The petitioner states that the area is in a "thermal belt," which covers the alluvial fans found along the western rim of the valley in Stanislaus County. Consistent breezes from the north, which cool the area in the summer, characterize this thermal belt, according to the petition. It adds that in the winter, the thermal belt has less fog and