

Vernal Pools of the Santa Rosa Plain

Vernal pools are seasonal wetlands with the following requirements:

1. Topography with depressions
Landscape is contoured with depressions that allow water to pond.
2. Impermeable layer
A subsurface layer of clay, volcanic rock or other prevents water from infiltrating the soil, trapping it at the surface.
3. Mediterranean climate
California experiences wet winters and summer drought. This wet dry regime lead to the evolution of unique plant and animals, adapted to a challenging physiological regime.

Vernal pools occur in regions throughout California. Some species of plants and animals live in vernal pools throughout the state. Others species are restricted to only one geographic location. The vernal pools of the Santa Rosa Plain host species that are endemic to Sonoma County, or in other words, found no place else in the world.

The Santa Rosa Plain pools occur as remnants in a matrix of agriculture, development, and fragmented remains of valley oak woodland, grassland, and persistent wetland vegetation. Some vernal pools fill only with winter rainfall, but pools located in the Laguna floodplain receive overflowing water during storms.

Vernal pools vary depending on their location on the plain. Heavy clay soils found in the southern end of the plain around Cotati and Rohnert Park differ when compared to northern Santa Rosa. The pools in the north and western Santa Rosa Plain are mostly comprised of Huichica loam soils and a hardpan layer of strongly cemented old valley floor alluvial soils derived from mixed sedimentary and volcanic ash sources. These pool areas have raised or hummocky areas intermixed with pools and swales. Pools adjacent to the Laguna de Santa Rosa and other parts of the southwestern Santa Rosa Plain typically occur on Wright clay loams.

Habitat loss within the Sonoma County caused endemic species (those with a limited geographical range) to become rare. Some are so rare they receive protection by the State and Federal government under the Endangered Species Act. The following species living within the Laguna de Santa Rosa have special status:

State and Federal Endangered Species



Burke's goldfields
(*Lasthenia burkei*)



Sonoma sunshine
(*Blenosperma bakeri*)



Sebastopol meadowfoam
(*Limnanthes vinculans*)

Federal Threatened Species

California tiger salamander
(*Ambystoma californiense*)



State Endangered Species

Many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*)

California Native Plant Society (CNPS) Special Listing

Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*)



Lobe's buttercup
(*Ranunculus lobeii*)



Dwarf downingia
(*Downingia pusilla*)

Douglas' mint (*Pogogyne douglasii* ssp. *parviflora*)

