

A RARE & UNIQUE ECOSYSTEM

Vernal pools are rare in southern California because of the unique geologic conditions needed for them to form and human development of coastal areas. Per the CA Department of Fish and Wildlife, up to 98% of vernal pool habitat has been destroyed in Southern California (CDFW, 2022).



Many plant and animal species are endemic to vernal pools, meaning they can only be found here and nowhere else. These species have become specially-adapted to be able to live in an ephemeral, or temporary environment, like a vernal pool. Vernal pools also provide rich foraging habitat for a wide variety of native and migratory birds.

CONTACT US

Thank you for taking interest in the vernal pools of our beautiful City of Costa Mesa. Feel free to contact us or visit us online for more information!



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City of Costa Mesa



Fairview Park

VERNAL POOLS

Parks & Community Services
Department

VERNAL POOLS

The seven vernal pools within Fairview Park are some of the only lasting examples of this ecosystem within California. Because of this, many of the plants and animals found in vernal pools are considered rare, threatened, or endangered by state and federal resource agencies. Vernal pools are a temporary type of wetland, forming in depressions where a hard underground layer prevents water from draining down into the soil. As water continues to pool during the winter and spring, it remains there until it evaporates and becomes completely dry in the summer and fall (CDFW, 2022).



FLORA & FAUNA

There are many plant and animal species that are unique to the kind of habitat that vernal pools offer. In order to survive and persist in such a habitat, plants and animals must be able to tolerate long periods of wet and dry conditions. Here are a couple examples of the types of flora & fauna we can see only at vernal pools:

San Diego Fairy Shrimp:

Up until recently, these shrimp were found only in vernal pools located in San Diego County. This shrimp is federally recognized as an endangered species. They maintain their populations by laying eggs, in this case cysts, which remain dormant during dry seasons and hatching when enough water is present within the pool. These cysts are fire resistant and can stay dormant for up to 10 years!



Prostrate Navarretia:

This flowering plant is part of the phlox family and goes by the common name prostrate pincushionplant. It is endemic to California and can be found in vernal pools and other similar habitats. Per Calflora, it is rare and fairly threatened in California.



PROTECTION & RESTORATION

Since 1996, the City has taken actions to conserve and restore the sensitive habitat within Fairview Park. Such projects include the implementation of the Master Plan, basin restoration, and public outreach.

In 2010, a grant from the Earth Island Institute and support from the Southern California Wetland Project made further restoration to Vernal Pool 1 possible. The native habitat was fully restored with this funding, along with the addition of 3 educational signs and the elimination of a user-defined trail that had developed through the middle of the pool.

More recently in 2019, a grant awarded to the City from the State of California Department of Parks and Recreation Habitat Conservation Fund has allowed for further restoration of vernal pools 5, 6, and 7. With this grant, the following restorative actions will be taken:

- Removal of non-native plants and turf
- Planting and establishment of vernal pool plants and a protective buffer
- Inoculation of fairy shrimp cysts
- Addition of delineation fencing and educational signage in and around vernal pools 5, 6, and 7