

FOGR MONTHLY

News about the Gualala River and Watershed



Mediterranean/Summer Fog

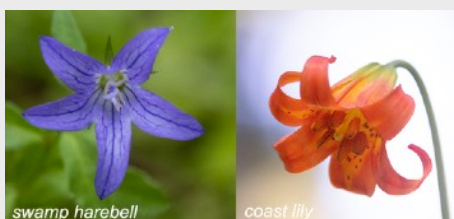
Warm summers inland and coastal fog create one of the rarest and most biologically diverse climates in the world. Outside of the Mediterranean Sea region, it is limited to five locations: two in Australia, one in South Africa, one in Chile and lastly, California.* Several geological factors come together to create this type of climate. –see p 2.

The Gualala River runs through this important biome that includes the redwood forest and threatened species like coho salmon, the northern spotted owl, red-legged frog, and rare wildflowers like the coast lily and swamp harebell.

*California Coastal Commission

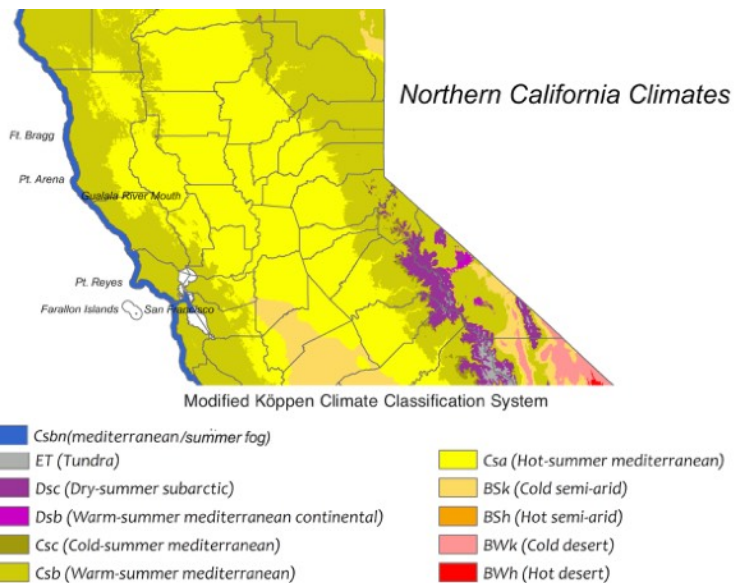


Northern Spotted Owl



swamp harebell

coast lily



Geography and Climate of the Gualala River

The Gualala River headwaters originate in a warm mediterranean climate and end where summers are cool when fog often shrouds the coast and nearby forests (see Csb & Csbn above.)Not only does this climate attract visitors because of its mild temperatures during summer, but it makes for one of the richest habitats in the world. It includes the redwood coastal mountains teeming with wildflowers and animal-life. The river empties into the Greater Farallones National Marine Sanctuary, where the food chain supports the tiniest to the largest marine life. It's no wonder the whales migrate along the California coast.

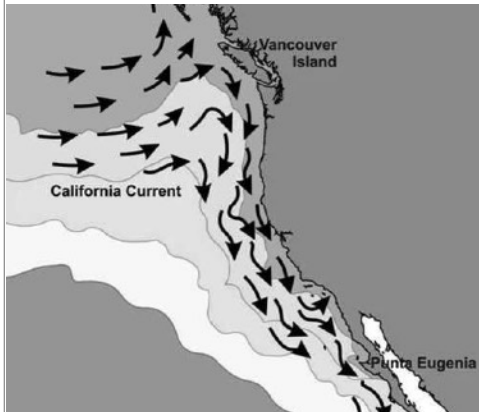
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Seasonal Fog on the “Mendonoma” Coast

Fog is formed when warmer air passes over the colder surface of the ocean. Below are some of the reasons this happens in the spring and summer seasons along the California coast.



California Current

The California Current has the biggest impact on the weather along the coast. It brings cold water from the North Pacific southward replacing warmer coastal surface water.

Northwesterly Winds

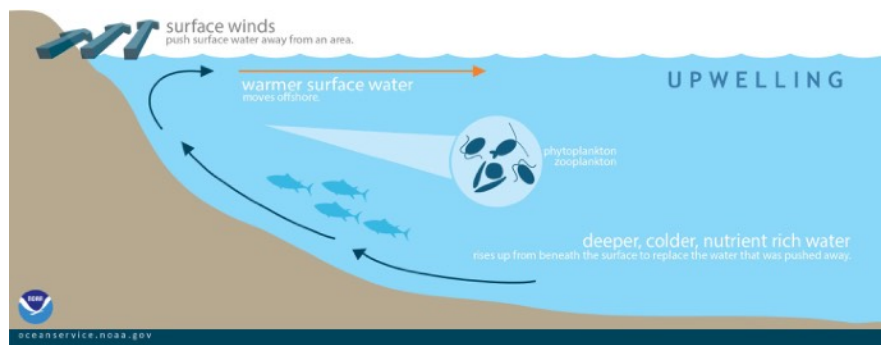
The winds during the spring and summer come primarily from the Northwest which in turn intensifies the California Current and the formation of the marine layer.

Temperature & Pressure Variation

Anyone living in the central valley longs for a vacation on the coast where fog and cooler weather provide some relief from the intense spring and summer heat. The pressure gradient between the two geographical areas is what pulls and holds the marine layer between the coastline and coastal mountains.

Upwelling

As already mentioned the eastern Pacific Ocean where the Gualala River empties is biologically diverse. When the California Current and the prevailing winds blow the warmer surface water away from the coastline, it is replaced by the deeper cold waters which in turn bring vital nutrients to the surface and marine life dwelling there. Ironically, stronger upwellings occur when the ocean temperatures are colder as in La Nina conditions which is causing our current prolonged drought, and lesser during the warmer El Nino which often brings more rain.



For more about upwelling please see [NOAA](#) and an article from [Bay Nature](#).

Fog and the Drought

Last month we learned fog is important for the growth of the coast redwoods which depend on water at the crown of the trees. This moisture collects and “rains” its excess on the flora and fauna below. Without the spring rain, fog is the main source of moisture for the redwood forests and coastal prairies. Fog also prevents direct sunlight from increasing temperatures which dry an already thirsty environment. With our rivers and reservoirs losing water at an alarming rate, it’s time to conserve and hope for more foggy days.

