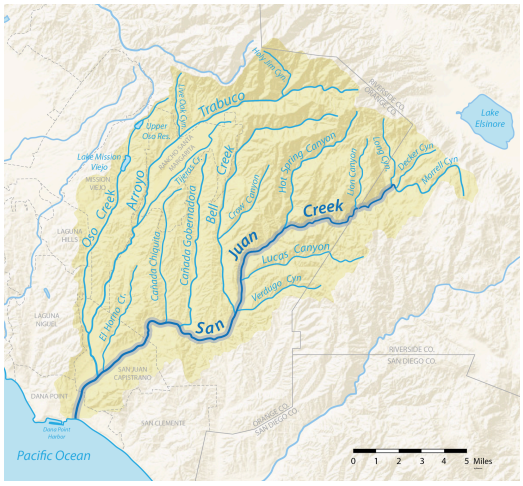
The sound of soft crashing waves, laughing children and sharp calls from western gulls flowing through the air are combined with the salty-seaweed scent of the ocean and sand in the wetlands of the San Juan Creek Estuary. The San Juan Creek Estuary is geographically found at the mouth of the San Juan Creek, around 29 miles in length from the upper reaches in the Cleveland National Forest, flowing down and emptying out in the Pacific Ocean at Doheny State Beach in Dana Point, California.



San Juan Creek Watershed, USGS, 2021

This is the setting for an important conservation initiative, the **San Juan Creek Estuary Restoration Project (SJCERP),** a collaborative effort to protect critical habitat necessary for many endangered endemic plants, animals, marine creatures, and local community members. Additionally, the San Juan Creek Estuary performs valuable ecosystem services for Doheny State Beach and the ocean beyond. It especially provides natural beauty, supports clean water, high biodiversity, and offers countless recreational activities. The Estuary Restoration Act was enacted in the year 2000 with the goal of addressing degraded estuaries experiencing wetland loss and

contamination from urban development. According to a NOAA study, it is estimated that a loss of 85% of estuary habitat has occurred on the West Coast, making estuary restoration a priority. When one sits quietly observing all the characteristics of this beautiful place, it evokes a sense of cultural and ecological hope that can be a model for how humans can put back the estuary to rights for the sake of all the flora and fauna including local community members. It is an area used by many and must also be cared for by many as well. Recently approved in November 2024, the San Juan Creek Estuary Restoration Project, headed up by George Sutherland of South Coast Trout Unlimited, is the first step to restore this critical habitat for all and educate the community about its importance. The SJCERP will also ensure the estuary's healthy existence into the future.

The endangered fish species, Southern California steelhead trout (*Oncorhynchus mykiss*), inspired this project as they were once abundant in the waters of the San Juan Creek watershed with healthy populations up until the 1940's (Katagi, 2012). The California steelhead was added to the endangered species list in 1997 as a result of loss and degradation of their habitat over time. Past steelhead populations ranged from 30,000 to 50,000, but sadly are now critically endangered with estimated numbers of less than 500 (Ctr for Biological Diversity, 2025). The decline of the steelhead populations in southern California is primarily related to multiple factors; urban development, agriculture, mining, mitigation barriers, stream water flow removal, and channelization of the creek. Additionally, degraded water quality is leading to increased difficulty for steelhead trout to survive (Katagi, 2012). Efforts to protect steelhead focus on preserving existing healthy habitat like the San Juan Creek Watershed and actively restoring it in areas where it has been degraded.

Steelhead Trout
Oncorhynchus mykiss, NOAA Fisheries

Main goals of the San Juan Creek Estuary Restoration Project

The aim is to restore and enhance the estuarine and riparian habitats supporting endemic species. This will be accomplished by improving water quality, natural hydrology, and allowing complex habitat communities to thrive (TU, 2024). This fieldwork will be carried out and monitored by SJCERP research team members and community-based participants. With changes in climate, native species in this estuary have been threatened and need support by restoring their degraded habitat. Restoration is essential for the future viability of these critical species and for increased biodiversity and carbon sequestration. This project has the high potential to mitigate climate change and reduce global warming overall (NCCOS, 2024). The ocean also benefits from estuary habitat restoration as native plants work to filter and hinder pollutants before water heads to the ocean.

Osprey in flight. Photo: Gabriel Chuc

Why should visitors at Doheny State Beach care about the San Juan Creek Estuary?

When the estuary is protected and restored, it results in cleaner water flowing out to the surfers, boogie boarders, kayakers, swimmers and beachgoers at Doheny State Beach. As the effects of climate change become more severe, watersheds and natural habitat are in decline resulting in lower biodiversity and eventually an unhealthy ocean. Many families, friends, local community members, and visitors from near and far come to spend a beautiful day at the beach. They want to experience an amazing day in a healthy coastal marine ecosystem, returning home with fun memories to cherish forever. Combining all aspects of restoring the San Juan Creek habitat, it is evidently clear that the project not only helps the steelhead trout, but the estuarine plants, animals, marine ecosystems and beachgoers as well. Not only is the estuary receiving an ecological upgrade on environmental levels, it leads to increased social benefits for communities participating in present day outdoor recreation activities and for future generations as well (Samonte et al., 2017).

Community Participation and Action

The plan moving forward will include community participation volunteer groups to carry out the full site monitoring protocol in the San Juan Creek Estuary. An official site monitoring protocol will be completed at each instance of data collection for the project including elements such as water testing and estuarine flora and fauna observations. Data entry into the database will be completed after every site monitoring session. Technical teams provided with proper monitoring equipment, tools of the trade, digital platform use via field laptops, etc. will monitor and establish baseline water quality data. This data will assist in developing a formal plan to be implemented for the estuary restoration.

One goal is to get visitors and beachgoers involved in understanding real estuary restoration work to inspire them in continuing to be good stewards of the coastal wetlands leading to the ocean. This kind of community-based support and participation will help increase awareness of conservation actions for ecologically valuable coastal estuaries and nearby marine ecosystems as well. Taking conservation action comes with scientific expertise, hard work, monetary funding, dedication, perseverance, long hours of research, and crucial networking of all the project members to achieve true success. These components are necessary for moving forward in taking positive action in conservation, especially within the Doho Beach Community.

Sunset and Doheny State Beach. Photo: E. Gardner Chuc, 2025

Sign Up here to be a Community Participant with the San Juan Creek Estuary Restoration Project.

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