

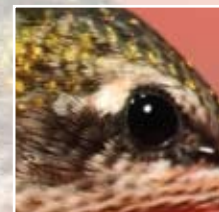
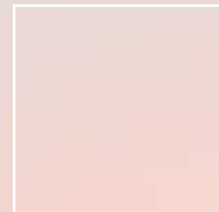


Creek Bed Erosion

Matilija Creek • Ventura County, Ojai, California



Bed Erosion



Synergy With Nature™



Creek Bed Erosion

Application: Pipeline Exposure

Owner: Southern California Gas

General Contractor: Submar

Location: Matilija Creek, Ventura County, Ojai, California

In the remote area of Matilija Canyon, approximately 6.5 miles southeast of Ojai, California, the Matilija Creek runs next to a private residence as it approaches and crosses a 20-inch natural gas pipeline located in the right-of-way (ROW) of Southern California Gas. Ojai, the gateway to the Los Padres National Forest, boasts as its main features, the Matilija Creek, its natural sulfur hot-springs, hiking trails, wildlife, and small, quiet residential communities. The Matilija Creek stream bed and banks are rocky with several active headcuts, splitting into two channels upstream of the ROW and merging together into one channel just downstream of the crossing. The banks, while fairly steep, were well vegetated with trees and brush, but tended to slough off during high flow events. Extreme flow events also released captured rock from the banks into the stream and moved larger rock formations from upstream, jeopardizing the pipelines. Small and mid-sized rocks moving through the ROW were causing exposure of the top part of the pipeline in the streambed. Added to these threats, was the failure of the left bank, leaving the pipeline suspended at the bank.



Because of their extensive success and experience with installation of articulated concrete revetment mats, Submar was contracted by The Southern California Gas Company to solve these erosion problems. Submar designed and installed a project to reshape and stabilize the banks with fresh fill, large boulders, a rock blanket and toe system. During the installation of the riprap and boulders, vegetation, native willows and other native trees found near the site were added to the rock and soil in several locations to increase the stability of the bank, create habitat and to add biodiversity. Along the streambed, this vegetated riprap will act to slow water velocities and encourage deposition of sedimentation. To protect the pipeline, Submar installed a system of articulated concrete revetment mats. The Submar protection system will provide and maintain cover over the pipeline in the matted area.



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