

Published July 31st, 2013

Laguna Creek Repair Project Protects Nature

By Sophie Braccini



Michael Vidra from BKF supervises the removal of concrete blocks from Laguna Creek. Photo Sophie Braccini

The heavy rains of 2005 turned Moraga's Laguna Creek into a raging monster that tore at its concrete containment walls as it tumbled through the Hacienda de las Flores property. Since then, blocks of concrete have cluttered the stream, erosion has increased and trees have fallen or become compromised.

The town secured the \$650,000 it needed to repair the creek banks; 75 percent came from the Federal Emergency Management Agency and the rest from the California Emergency Management Agency. The repair work began recently and will continue until the end of September.

A field biologist constantly monitors local wildlife and makes sure that birds are not disturbed during their reproductive cycle and red-legged frogs hop in peace.

Laguna Creek runs through the eastern border of the Hacienda's property, next to the Pavilion, before crossing under Devin Drive; it merges with Moraga Creek, which flows to the San Leandro Reservoir. The year round stream is peaceful most of the time and provides a nice interface with the nature trail at the Hacienda. It used to run where the Pavilion is now located; it was Donald Rheem who diverted the flow in the early 1930s.

When unusually heavy rains fell in 2005 the creek became so powerful it caused major damage to the concrete side banks and the concrete cover above the 9-foot pipe that takes the stream under the site's interior roadway. Repairs have to be done upstream and downstream of the tunnel.

"There are three enemies to concrete," says Michael Vidra of BKF Engineers, the firm that was awarded the construction contract, "water, water and water."

A backhoe has been removing large pieces of concrete that fell into the creek during the storm and breaking up the remaining pieces. "The first step was to divert the water with a pump and a pipe so we can work in the stream," explains Vidra, "then after we remove the concrete we will dig the side banks and bring it to a 3 to 1 slope, and fill it with large diameter rocks. Then we will build a more engineered wall with large footing."

Downstream the concrete was also torn and the erosion of the unprotected banks makes visible the roots of trees that are starting to lean toward the creek. There the creek runs parallel to Moraga Road - it is not hard to imagine what would happen if the erosion continued and/or water infiltrated under the main thoroughfare.

"On this side (downstream from the pipe), we will remove the concrete, clean the bank and slope it," says Vidra. "Large-diameter rocks will protect the banks from erosion, only a small portion of the bank will get a concrete wall."

As the construction crew does its job, field biologist Gretchen Zantzing comes by frequently to check on the fauna of the creek. "Before the work started we surveyed all the trees to check for nests," she explains. "The Migratory Bird Act says that construction needs to establish a buffer zone around nesting areas until the young are gone."

Fortunately, no nests were found, but Zantzing continues to monitor the site almost daily. She is also mandated to make sure that endangered species such as the red-legged frog are not disturbed. "It is so great that this endangered animal is doing so well in Moraga," she says. Approval was obtained to take out some trees. "This is a lovely area and very few trees had to be removed," she says, "in fact the engineers are going to save some of them as they repair the banks."

The two staging areas for the work site are hidden behind trees and additional green screens are added on Friday afternoons when work stops so that the Hacienda de las Flores can be a bucolic wedding venue.

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[back](#)

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