

## Culvert Replacements - Berens and McAllister Sloughs



New McAllister Slough Culverts with 2 pipes capped off for future use

Flood Control District Zone 9 recently replaced two well-aged culverts on Corte Madera Creek in Kentfield. The two deteriorated culverts were installed by the U.S. Army Corps of Engineers in 1969 as part of the federal flood control project. Flood Zone 9 is responsible for maintaining the completed sections of that project from the bay to the end of the concrete channel in the Town of Ross.

The culverts were scheduled to be replaced in 2006, but during the early design phase, the Ross Valley Sanitary District requested

we delay our work due to a concern about disturbing the ground near a fragile, 36-inch, pressurized sewage pipe (force main) installed above the culverts. Staff of both agencies worked together to develop a coordinated approach for the replacement of the culverts along with the Sanitary District force main replacement project.

The culvert replacements benefit the nearby community by restoring a part of the storm drainage system for Berens Drive (Berens Slough pipe and tidegate) and restoring full tidal flow to the marsh area known as McAllister Slough, an ecology study area for the College of Marin. The replacement project also included adding two extra culverts at the McAllister Slough location to be used along with future infrastructure improvements as part of a long-term flood control and sea level rise adaptation strategy, consistent with the Ross Valley Capital Improvement Plan Study for Flood Damage Reduction and Creek Management. Until the additional infrastructure improvements are made, the extra culverts will remain capped off.

The culverts were replaced in late November 2011 and are operating as expected. The cost of the project was \$152,680.



Old McAllister Slough culvert was heavily deteriorated