

install plants and remove weedy invasive plants at several projects. These sites were revegetated with willow cuttings, cottonwood poles and other native trees and shrubs.

The Red Rock Restoration Project was planted with willow and cottonwood poles placed in 10 foot-deep "pot holes." The deep plantings will reach the summer water table and should not require supplemental irrigation during the dry season. Trenches were excavated in a chevron pattern and planted with the willow cuttings to encourage growth of riparian habitat that will not only stabilize weak riverbanks, but also trap sediment and debris during high flow events.

◆Propagated Plants from Seeds Collected in Carmel River Area

In an ongoing effort to improve natural vegetation along the Carmel River, District staff collect seed from several species of native stream-side trees and shrubs for propagation by a local nursery. When the seedlings are large enough, they are transplanted at the District's restoration sites. In 1998, staff planted and irrigated 195 cottonwood, sycamore, box elder and elderberry trees. The California Division of Forestry and Fire Protection awarded the District a \$1,625 grant for the purchase of an additional 500 native riparian tree seedlings.

◆Cleared River Channel of Debris

Each year staff identifies areas along the river that should be cleared of debris and excess vegetation during annual channel clearing operations. In 1998 approximately 155 cubic yards of debris were removed from the active channel of the river. Staff was assisted in this effort by a small crew from the CCC. This effort should minimize obstructions to river flow and the possibility of bank erosion during high flows.

◆Monitored Growth of Streamside Vegetation

The District is the only agency to monitor the long-term effects of groundwater pumping on vegetation in the Carmel River basin. During the dry season, District staff took weekly measurements of leaf moisture stress and conducted annual surveys to document height, growth rate and survival of plants in District restoration projects.

Steven Waters planting willow and cottonwood poles to revegetate and stabilize a stretch of riverbank damaged by high winter flows. In 1998, District staff planted and irrigated 195 trees that were propagated from seeds collected from riparian species growing along the Carmel River banks.

