

reaches of the lower Carmel River. Of the total, 35,877 fish were released into viable habitats upstream of the Narrows (River Mile 9.6); and 521 fish (1.4% of total) died during rescue and transport operations.

Rescued Fish Released from Sleepy Hollow Rearing Facility

District staff released the 7,035 fish produced during the 2001 rearing season between November 2001 and March 18, 2002 when the facility was shut down for repairs to the pumps. Of the 7,035 fish released, 6,812 were young-of-the-year from the rearing channel and 223 fish were released from the rearing tanks. The survival rate of the young improved with the addition of a fish screen to prevent the larger fish from entering the rearing channel.

Federal and State Grant Funds Received

The District completed modifications to the Carmel River channel and the Old Carmel Dam to improve conditions for upstream fish migration with federal and state grant funds. The District received \$35,548 in 2000 from the California Coastal Salmon Recovery Program for three projects designed to improve conditions for Carmel River steelhead. These projects include modifying the Carmel River channel at four locations; improving the Rancho San Clemente Pond outlet works; and removing gravel from the San Clemente Reservoir and injecting it below San Clemente Dam to improve the spawning habitat. The remaining projects will be completed in March 2003.

California Red-Legged Frogs Protected

The District continued to monitor and document loca-

tions of California red-legged frogs within the Carmel River watershed. The U.S. Fish and Wildlife Service authorized several District staff members to move frogs out of harm's way during construction at specific restoration project sites.

District to Receive Long-Term Regional General Permit in 2003

The District first applied to the U. S. Army Corps of Engineers for a long-term Regional General Permit (RGP) in May 1999. This permit will allow the District to pursue riverbank restoration projects and complete routine maintenance for a

specified period of time, as well as oversee projects undertaken by private landowners. The District has resolved most of the concerns raised by the U. S. Fish and Wildlife Service and NOAA Fisheries to meet the stringent guidelines of the Federal Endangered Species Act to ensure that these activities would not harm or harass steelhead and California red-legged frogs. The District completed a detailed framework for conducting future activities in December 2002 and expects to obtain the RGP in 2003.

The Effects of Large Woody Debris on the Carmel River Studied

The District contracted with California State University at Monterey Bay to document and assess the effects of large woody debris (LWD) on the river. LWD, which is wood that is more than six inches in diameter and more than five feet long, can help create superior habitats for aquatic species and provide nutrients, shade, cover and substrate conditions suitable for steelhead, western pond turtles, and red-legged frogs.

During the past several decades public agencies and private landowners have routinely removed LWD to prevent flooding, bank erosion, and damage to bridges. The District is developing a baseline of data that will provide the information needed to balance environmental needs with protection of life, property, and public infrastructure.

Log/Rock Deflectors Installed at the deDampierre Restoration Project

The California Department of Fish and Game (CDFG) provided a grant of \$52,000 to install five large wood habitat structures along 400 lineal feet of



Installation of a large wood habitat structure near deDampierre Park in Carmel Valley Village (pictured: Mark Bekker and Matt Lyons, MPWMD)