

(mg/L). Water temperatures were slightly cooler at S2 than last month, at 18 to 20 degrees Celsius. Overall, water-quality conditions in the lagoon remain generally poor for rearing steelhead.

LOWER RIVER STEELHEAD RESCUES: District staff began fish rescues on April 19, 2013 as flow at the HW 1 gage declined to 10 cfs. Through the end of September, 42,805 steelhead had been captured and released upstream in permanent habitat or taken to the Sleepy Hollow Steelhead Rearing Facility (SHSRF) including: 41,893 young-of-the-year (YOY), 650 age 1+ juveniles, 13 adults (released in ocean), and 249 mortalities (0.58%).

SLEEPY HOLLOW STEELHEAD REARING FACILITY: The SHSRF began accepting rescued fish on May 28, 2013. Through the end of September, a total of 23,678 fish had been stocked in the rearing channel and troughs. Due to critically low-flow conditions in the river and projected cut backs on releases from Los Padres Reservoir to conserve storage, staff consulted with NOAA Fisheries and CDFW on releasing fish from the Facility. The projected releases from the LPD in October and November would not provide enough flow to reliably operate the pumps at the Facility, coupled with the two to three weeks required to release all the fish. Therefore, it was agreed upon by Staff, NOAA Fisheries and CDFW to start releases in September.

Fish releases started on September 19 and were completed October 5, 2013. A total of 9,996 fish were released including: 9,847 YOY and 149 age 1+ juveniles. There were a total of 13,682 mortalities at the facility during the season: 10,912 due to disease, stress, or general poor health; resulting in an overall survival rate of 42%. Approximately 75% of these mortalities occurred in July when the facility's rearing troughs (holding small 1-2 inch fish) suffered an acute disease outbreak of ICH (*Ichthyophthirius*) and Columnaris (*Flexibacter columnaris*). This outbreak lasted about three weeks and was likely the result of high water temperatures and poor water quality being released from the San Clemente Reservoir. In addition, there were 2,770 unaccounted-for-mortalities which are fish that likely fall victim to intraspecific competition (cannibalism).

Fish were released in three general locations: 1) 7,901 in a three-mile reach from Stonepine Bridge (RM 15.8) to SCD (RM 18.6); 2) 1,044 at several sites along the Cachagua Community Park (RM ~24) to Princes Camp; and 3) 1,051 to NOAA Fisheries Lab in Santa Cruz for use in a Carmel River PIT tagging study to be released back into the Carmel River later this year.

Carmel River Lagoon
September 2013

