**Effects of California’s Drought on Lower Merced River *Oncorhynchus mykiss* (Steelhead/Rainbow Trout)**

**Domenic Giudice CDFW**

 During the spring and summer of 2014 the steelhead/rainbow trout (*Oncorhynchus mykiss*) population in the lower Merced River was jeopardized by decreased streamflow and increasing water temperature. The California Department of Fish and Wildlife (CDFW) anticipated this situation in early spring based on information from dam operators and CDFW water temperature modeling. CDFW chose to monitor the situation closely and developed a contingency fish rescue plan. CDFW monitored the *O. mykiss* situation using water temperature monitoring with loggers recording temperature every hour, this data was downloaded daily. CDFW began conducting snorkel surveys on the Merced River to assess O. mykiss abundance and distribution. The CDFW Fish Rescue Plan for the Merced River stated that if *O. mykiss* are observed in the Merced River and water temperature daily average becomes higher than 20°C (68°F) an *O. mykiss* rescue would commence.

 Snorkel surveys indicated there was a population of *O. mykiss* occupying the upper reaches of the lower Merced River and water temperature monitoring indicated that daily average water temperatures exceeded 20°C by mid-July of 2014. *O. mykiss* rescue operations began, initially by opening the spawning trap at the hatchery and running water through the trap to attract *O. mykiss* into the trap. This yielded a small number of fish and therefor other options were pursued. Angling was the next tactic used and as it was slow initially attempts were made to electrofish and seine for *O. mykiss*. However these two techniques yielded no fish. Adjustments were made to angling efforts and ultimately this became the most successful method to capture *O. mykiss*. Between trapping and angling *58 O. mykiss* were relocated to the Merced River Hatchery. Follow up snorkel surveys in 2015 showed a drop in O. mykiss observations, weekly average count in 2014 was 49 and dropped to 4 in 2015.

 In December of 2014 all of the rescued O. mykiss were PIT tagged and during the PIT tagging process some of the fish were releasing eggs and milt. These fish were later spawned at the hatchery. By December of 2015 there were 606 juvenile *O. mykiss* and 35 adult *O. mykiss* remaining (23 adults died during the holding period) in the hatchery tanks and all fish were tagged with a spaghetti tag which will help to monitor successes of this rescue. Snorkel surveys and temperature monitoring will continue in the spring of 2016 to determine survival and distribution of the rescued fish and the conditions to which they are exposed.