



## Field Activity Advisory

# Redd and Carcass Survey and Egg Survival and Emergence Study

November 14, 2014

The San Joaquin River Restoration Program is conducting activities to better understand salmonid spawning habitat quality in Reach 1. These surveys will focus on: 1) locating redds (nests); 2) describing the physical habitat characteristics where redds are placed; 3) installing redds grates and evaluating their effectiveness in preventing redd superimposition (another female laying eggs on an existing redd); and 4) monitoring egg survival and emergence rates from capped redds. This study will assist the SJRRP in identifying potential limitations in the available spawning habitat and inform managers of the need, or lack thereof, to implement spawning habitat restoration actions.

**Who:** U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW)

**What:** Weekly surveys will be conducted by boat to find, measure, and mark redds produced by Chinook salmon that have been transported to Reach 1 as part of adult trap and haul program currently underway at the San Joaquin River confluence of the Merced River. Chinook salmon carcasses encountered during redd surveys will be sampled for scales, otoliths, and physical



**Figure 1:** Chinook salmon spawning in Reach 1 of the San Joaquin River during 2013. Arrows point to Peterson disc tags implanted in transported adults.

observations and measurements. Installation and monitoring of emergence traps will take place at up to 10 locations in Reach 1 of the San Joaquin River. Redds placed naturally by transported adults will be capped to assess egg survival and emergence rates. Water quality monitoring equipment will be installed to better understand factors affecting egg survival and fry emergence rates. Emergence traps will be monitored regularly to assess the number and condition of emerging juveniles. Additionally, reinforcing bar will be placed over redd tailspills of early spawning fish to evaluate whether these “redd grates” could be an effective method to minimize redd superimposition. Environmental disclosure documents have been prepared including a California Environmental Quality Act Notice of Exemption and a National Environmental Policy Act Categorical Exclusion and are available upon request.

**When:** Redd surveys are scheduled to begin November 18, 2014. Emergence traps will be installed approximately one week before expected fry emergence and monitored regularly through February 2015.

**Where:** These activities will occur in Reach 1 of the San Joaquin River from approximately 2 miles downstream of the Highway 99 bridge to Friant Dam.

Access will occur from the public right-of-way or in areas where private landowners have granted access.

Questions about this activity should be directed to the study's agencies points-of-contact:

Zachary Jackson, Fisheries Biologist  
U.S. Fish and Wildlife Service  
Office: (209) 334-2968 ext. 408  
Email: Zachary\_Jackson@fws.gov

Matt Bigelow, Environmental Scientist  
California Dept. of Fish and Wildlife  
Phone: (559) 243-4014 ext. 258  
Email: mbigelow@wildlife.ca.gov

For more information, please visit the SJRRP Web site at [www.restoresjr.net](http://www.restoresjr.net). Questions about activities on public and private land should be directed to the SJRRP Landowner Coordinator, Craig Moyle. Craig's contact information is provided below.

Craig Moyle, Landowner Coordinator  
Office (operator): 916-924-8844  
Office (direct line): 916-418-8248  
Mobile: 916-642-6383  
E-mail: [craig.moyle@mwhglobal.com](mailto:craig.moyle@mwhglobal.com)



Figure 2: Emergence trap placed over redd in Reach 1 of the San Joaquin River during 2013.

**For more information, please visit the SJRRP Web site at [www.restoresjr.net](http://www.restoresjr.net).**