Bureau of Reclamation
2800 Cottage Way, MP-170
Sacramento, Calif. 95825-1898

Field Activity Advisory
Trap and Haul of Adult Fall Run Chinook
October 1 - December 15, 2012

The San Joaquin River Restoration Program is conducting a research study to capture salmon that are able to get past the Hills Ferry Barrier (HFB) near the confluence of the Merced River and relocate them to Reach 1 of the Restoration Area. This study will also evaluate the feasibility of and develop protocols for using trap and haul to transport adult Chinook salmon around existing barriers to suitable holding and spawning habitat in the San Joaquin River (SJR). Where the transported adult salmon spawn in Reach 1 will also be monitored, and the information used to adaptively manage future efforts for more effective implementation of the Restoration Goal.

Who: Bureau of Reclamation, U.S. Fish and Wildlife Service (FWS), and California Department of Fish and Game (DFG)

What: The Trap and Haul study will utilize adult fall-run Chinook salmon collected above the HFB - a temporary barrier that is operated every year from mid-September to mid-December in the SJR near the Merced River confluence used to keep salmonids from the SJR mainstem and redirect them to the Merced River. Fish that get past the barrier travel up the SJR to encounter dry reaches and often go into Mud and Salt Sloughs that typically have greater flow than the mainstem SJR, but no suitable spawning habitat. These fish are considered lost and are not able to contribute to populations in the downstream tributaries. This study provides an opportunity to collect these fish for Restoration activities.

Fish will be collected using fyke nets installed upstream of the HFB. Fyke nets used in the mainsteam river are constructed of two 150 ft long, 6-ft tall, 1.5 inch #15 treated nylon wingwalls funneled to a 6ft x 6ft collection box that leads to five, five-foot diameter fiberglass hoops with 10-inch diameter funnel throats. Nets set in sloughs will be similar in design except they will be 4-feet tall with 1-inch square #21 treated nylon netting and 3.5-foot fiberglass hoops. T-posts will be used to anchor the wing wall to one or both stream banks depending on location and presence of boater traffic. T-posts will also be used to stake off the terminal end of the trap with additional T-post being placed along the wing walls for support as needed. T-posts will be pounded in to a depth of 1-2 feet using hand tools.

All trapped salmon will be measured for fork length, sexed, given a condition score (i.e. good, poor. etc.), tagged with a visible external floy tag and an acoustic transmitter. Tagged fish will be loaded streamside into a fish transport tank that will be filled with water at ambient river temperature with 10% NaCl. Dissolved oxygen will be maintained at 8mg/L or more in the transport tanks during the fish haul upstream to a suitable release location below Friant Dam and above the Highway 99 Bridge. Fish will be acclimated to the release location while remaining in the haul tanks upon arrival if the water temperature difference is greater than 2º C. Once acclimated, fish will be removed from the livewells with a large dip net and released.

Single channel receivers (receivers) capable of identifying coded transmitter tags will be strategically placed to monitor fish movements throughout the SJR from downstream of Friant Dam, and various locations at spawning or passage points in the area down to the SR 99 Bridge. A maximum of 20 receivers will be used. Additionally, tagged fish will be manually tracked using a portable receiver from a boat and from shore to determine the locations between receivers or specific locations within sections of the river. Fish will be tracked and monitored to determine movements, observe behavior, redd selection locations, and assess survival. Information gathered during this study will better inform future studies and improve trap and haul techniques that may eventually be necessary for reintroducing spring-run Chinook salmon.

Where: Fish will be collected using fyke nets installed upstream of the HFB, at Mud and Salt Sloughs and on the SJR above the confluence with Salt slough.

When: October 1– December 15, 2012. Fyke nets will be installed October 1, 2012, and will be removed in December or earlier if flow conditions dictate removal.

Considerations:

Access to the locations 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 agency points-of-contact using the information provided below.

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Questions about the SJRRP's field activities on public and private land should be directed to the SJRRP Landowner Coordinator using the information provided below.

Craig Moyle, Landowner Coordinator
Office (direct line): 916-418-8248
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Email: craig.moyle@mwhglobal.com

Contact the SJRRP Hotline, 916-978-4398, or email InterimFlows@restoresjr.net if you see any problems or have any concerns.

For more information, please visit the SJRRP Web site at www.restoresjr.net.

Field Advisories for activities are available at www.restoresjr.net/activities/field/index.html