

## Field Activity Advisory San Joaquin River Rotary Screw Trap Study March – July, 2013

This multi-year study will evaluate the feasibility of using rotary screw traps (RSTs) to assess juvenile salmon migration behavior in the San Joaquin River Restoration Area. The study will also assess rotary screw trap efficiency, as well as in-river spawning success and survival by comparing numbers of marked, artificially spawned and cage-reared juveniles with unmarked, naturally spawned, river-reared juveniles (mark-recapture method). The first year of the study will use approximately 60,000 marked juvenile study fish from Feather River Hatchery, Merced River Hatchery, and juveniles produced by streamside spawning previously trapped and hauled adult fall-run Chinook from the lower San Joaquin River.

**Who:** California Department of Fish and Wildlife, Bureau of Reclamation, and the U.S. Fish and Wildlife Service

**What:** The RSTs in this study measure 10-12 feet by 22 feet by 4 feet, extending above or below the water surface. When installed, RSTs will be positioned within the river thalweg (the line of fastest flow in the river) in order to catch the maximum amount of flow. A wing wall panel may be used to increase RST efficiencies; constructed of one treated nylon wing wall 100 feet by 6 feet 3/16-inch mesh funneled to the RST. If used, wing wall panels would be held in place with anchored t-posts. RSTs will be held in place with 6 millimeter diameter or thicker cable anchored to large, permanent structures on the bank. If possible, overhead cables will be used to secure traps to large trees, via wrapping cable around trees, existing features, or bridge pillars. A safety cable will be attached to the rear of the trap and anchored to one side of the river bank, allowing the RST to swing to shore in the event that other cables fail. Overhead cables will be high enough as to not impact boater traffic; safety cables and wing wall panels will be anchored to only one side of the river bank, thereby allowing passage near the opposing shore.



Example of Rotary Screw Traps on the Stanislaus River

### 2013 Rotary Screw Trap Locations

Highway 99 Bridge	Latitude: 36.843765	Longitude: 119.932331
Downstream San Mateo	Latitude: 36.782101	Longitude: 120.312864

**Where:** For 2013, one RST will be installed near the Highway 99 Bridge and another downstream of the San Mateo Crossing above Mendota Pool. In subsequent years, RSTs will be placed near the Highway 99 Bridge, Gravely Ford, downstream of the Chowchilla Bifurcation Structure, and downstream of the San Mateo Road crossing.

**When:** The 2013 RSTs will be installed in mid-March and removed on or before July 1. These and other facilities will track juvenile Chinook population and migration monitoring activities will occur continuously from March 1 – July 1, 2013, with traps checked daily.

**Considerations:** All wires and cables anchoring the RST will be marked with brightly colored flagging and flashing lights as to be easily seen. Signage and/or buoys will then be placed both upstream and downstream of traps to instruct boaters on how to safely avoid the RST. The RST at Highway 99 will be configured to permit boat passage on the Madera County side of the river channel. Boaters are urged to use caution and heed all posted warning signs.

Access to trap 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 (operator): 916-924-8844  
Office (direct line): 916-418-8248  
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**Contact the SJRRP Hotline, 916-978-4398, or email [InterimFlows@restoresjr.net](mailto: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](http://www.restoresjr.net).**