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

Field Activity Advisory
San Joaquin River Rotary Screw Trap Study
January – June, 2017

The San Joaquin River Restoration Program plans to install a rotary screw trap (RST) at two San Joaquin River locations to assess juvenile Chinook salmon production, size, migration timing, and survival in Reaches 1 and 2A. This activity continues a multi-year study launched in 2013. The study will additionally assess RST capture efficiency by releasing approximately 40,000 juvenile fall-run Chinook salmon produced at a California Department of Fish and Wildlife hatchery in Friant. The hatchery raised fish – progeny of adult catch and transport efforts in November and December in Reach 5 of the lower San Joaquin River – will be marked and adipose fin-clipped.

Who: California Department of Fish and Wildlife (CDFW) and Bureau of Reclamation

What: A RST is a self-powered fish trap that features a large spinning drum that captures and contains fast swimming fish without injury. Supported by a pontoon barge measuring approximately 10 feet by 22 feet (see Figure 1), the RST is placed in the line of the fastest flow of a channel, also referred to as the river thalweg. To hold the RST in place, a 6 mm diameter or thicker cable will be anchored to large permanent structures on the bank, such as trees, bridge pillars and other existing structures. 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 will be anchored to only one side of the river bank, thereby allowing passage near the opposing shore.

Reclamation and CDFW staff will check the RSTs daily. Data collected from captured juvenile Chinook salmon will include fork length, total length, weight, and a smolt index score. Additionally, tissue samples of naturally produced (i.e., adipose fin intact) juveniles will be collected. Data collected from bycatch (i.e., all other fish species) will include total length for the first ten individuals of each species and a total count of any remaining individuals.

Figure 1: Rotary Screw Trap at the Highway 99 Bridge

Where: The 2017 study will include one RST installed below the Highway 99 Bridge and another downstream of the San Mateo Crossing above Mendota Pool. Access to trap locations will occur from the public right-of-way or in areas where private landowners have granted access.

When: The traps will be installed in January and removed on or before July 1.

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Considerations: Boaters are urged to use caution and heed all posted warning signs when transiting areas were an RST is positioned. Each RST will be configured to allow boat passage on one side of the river channel. 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 be placed both upstream and downstream of traps to instruct boaters on how to safely avoid the RST.

Questions about this activity should be directed to the study's agency points-of-contact using the information provided below.

Pat Ferguson
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California Department of Fish and Wildlife
Phone: 559-243-4014, ext. 292

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
Mobile: 916-642-6383
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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.