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

Field Activity Advisory
Juvenile Central Valley Spring-Run Chinook Salmon Monitoring
December 1, 2017 – June 1, 2018

The Bureau of Reclamation and California Department of Fish and Wildlife, as part of the San Joaquin River Restoration Program (SJRRP), will perform monitoring for juvenile spring-run Chinook salmon (*Oncorhynchus tschawytscha*; Figure 1) in Reaches 1–2 of the Restoration Area December 1, 2017 – June 1, 2018. This effort will estimate production and distinguish strategies for juvenile Chinook Salmon emigration from the Restoration Area, overall survival rates for each juvenile life stage in rearing and migration areas, the spatial distribution of mortality and, if feasible, determine behavioral responses of juvenile emigrants to flow management strategies (e.g., pulse flows). Data collected for this study will inform SJRRP fisheries and flow management decisions and habitat rehabilitation efforts that aim to increase Chinook salmon abundance by reducing juvenile losses in a highly modified river system.

Figure 1. Juvenile Chinook salmon.

Who: Bureau of Reclamation and California Department of Fish and Wildlife

What: Rotary screw traps (RSTs) are commonly used to monitor impacts of river management (e.g. habitat restoration, flow manipulation, dam management) on wild stocks. These traps can also be used to assess production and survival between life stages, such as egg-to-fry, egg-to-smolt or parr-to-smolt, and the effects of environmental parameters on migration timing and development.

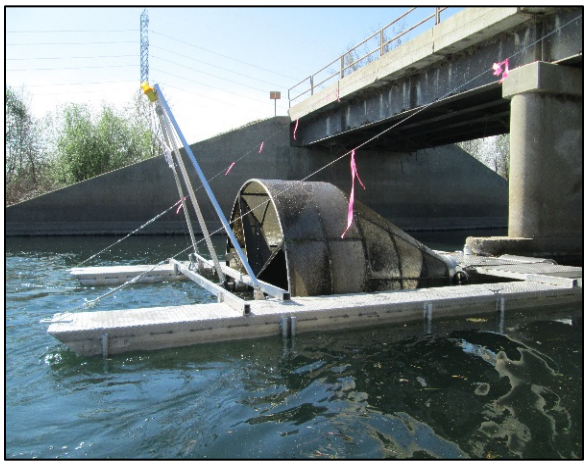

Figure 2. Rotary screw trap on the San Joaquin River, California.

Rotary screw traps (2.4-m diameter cone) will be operated at four locations (December–June) to index survival between the locations and estimate the size and life stage of juvenile Chinook salmon emigrating from the spawning and rearing locations upstream of Mendota Pool. Operation of SJRRP RSTs will generally follow guidelines outlined in standard protocols (Comprehensive Assessment & Monitoring Program 1997, Volkhardt et al. 2007). RST monitoring will terminate when at least seven consecutive days of trapping results in zero catch after early May. To derive accurate abundance estimates at each trap, it will be necessary to estimate RST efficiency for each site. Mark-recapture trials with tagged hatchery juvenile Chinook salmon will be performed to estimate trap efficiency at all sites. Trap calibrations are performed to measure changes in trap efficiency associated with variation in fish behavior (e.g., developmental changes) and environmental conditions (e.g. water quality and flow). Traps are typically checked twice a day and fish are enumerated by species, measured and weighed. Fish quality and general health are also assessed. Genetic samples will be collected from all juvenile Chinook salmon collected at the traps and fish will be released alive to the river after capture.

Boat passage will be made available, and orange buoys, flagging, and caution lights will alert river-users to the traps.

Where: Monitoring activities will occur on the San Joaquin River from Friant Dam to Mendota Pool.

When: Rotary screw traps will be installed November 27, 2017 – June 30, 2018, and will be operated continuously if environmental conditions are considered adequate.

Questions about this activity should be directed to the study's agency biologists, and 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:

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 provide below.

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Questions about the SJRRP or Program field activities on public and private land should be directed to the SJRRP Public Affairs Specialist or Landowner Coordinator using the information provided below.

Josh Newcom, Public Affairs Specialist
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Contact the SJRRP Hotline, 916-978-4398, or email RestorationFlows@restoresjr.net if you see any problems or have any concerns.

For more information, please visit the SJRRP Web site at www.restoresjr.net or contact Josh Newcom, Public Affairs Specialist, at 916-978-5508. Field Advisories for activities are available at http://52.53.144.83/get-involved/field-advisories/