

Field Activity Advisory Benthic Macroinvertebrate Bioassessment Study May 29, 2012

Benthic macroinvertebrate (BMI) communities are both bioindicators of stream conditions and food resources for fish. These communities of tiny organisms living in the river comprise the effects of water quality stressors such as increased temperature, toxic chemicals, excessive nutrients and sediment loading. In addition, BMIs are a key component of the prey base for fish in the San Joaquin River.

This study is intended to evaluate the impact of the San Joaquin River Restoration Program (Program) actions on ecological integrity and water quality conditions as indicated by changes in the BMI communities. As portions of the river are restored and vegetated, the BMI communities will likely signal changes in limiting factors including physical habitat and stream conditions. The study will provide information associated to physical habitat objectives set forth by the Fisheries Management Plan (SJRRP 2010) of the Program that, in conjunction with population objectives, will help evaluate overall Program success. In addition, the San Joaquin River bioassessment is consistent with ongoing efforts by the State Water Resources Control Board to implement statewide biological objectives in California.

Who: California Department of Water Resources (DWR) and California Department of Fish and Game (DFG)



What: DFG and DWR staff characterize the physical habitat at 30 sites throughout the Restoration Area based on access, wadeable depths and other criteria consistent with California's Surface Water Ambient Monitoring Program (SWAMP) Bioassessment Procedures. Staff will navigate to these sites using kayaks or boats within each reach based on the schedule. This effort includes reconnaissance surveys and staff will return to the sites at a later date to survey and collect BMI samples. Normally, only one site within a given reach is sampled per day.

This ongoing study intends to capture temporal and spatial variation in physical habitat features during a minimum period of 3 years between the months of May and September from 2010 until 2012. During bioassessment, the crew conducts a general assessment of habitat complexity, riparian vegetation, bank stability and human influence. Benthic macroinvertebrate samples are collected at the designated sampling locations during the SWAMP index period of late May through the end of September. Subsequently, the BMIs will be subsampled and sorted to yield information about species richness and community composition.

Where: Predetermined sampling locations throughout the San Joaquin River Restoration Area from just below Friant Dam to the confluence with the Merced River.



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When: May 30 – July 3, 2012.

Tentative schedule for reconnaissance surveys:

Reach 1 – May 30 – June 6

Reach 2 – June 7 - 14

Reach 3 – June 19, 20

Reach 4 – June 21 - 28

Reach 5 – July 2, 3

Subsequent bioassessment surveys may extend through the month of September 2012.

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 Outreach Coordinator using the information provided below.

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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.**

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