

Appendix D

Theme and Project-Specific Studies

**Final
2015 Monitoring and Analysis Plan**

**SAN JOAQUIN RIVER
RESTORATION PROGRAM**

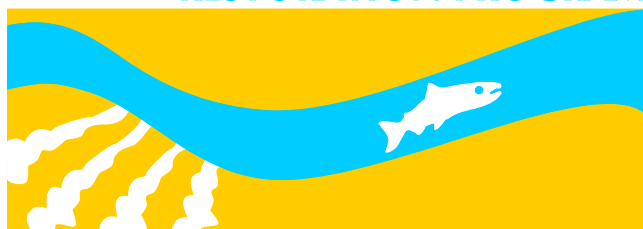


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| Study 31 | The Effects of a Riparian Forest on Water Temperatures in the Restoration Area |
| Study 33 | Reducing Spring Water Temperatures below Sack Dam |
| Study 35 | Floodplain Production Study |
| Study 40 | San Joaquin River Spawning Habitat Suitability |
| Study 43 | USGS Non-Structural Fish Passage |
| Study 50 | Deriving Vegetation Characteristics from LIDAR Data and Two-Dimensional Hydraulic Modeling of the San Joaquin River Floodplain |
| Study 52 | Gravel Pit Delineation |

Abbreviations and Acronyms

| | |
|------------|---|
| RA | Restoration Administrator |
| Settlement | Stipulation of Settlement in <i>NRDC, et al., v. Kirk Rodgers, et al.</i> |
| SJRRP | San Joaquin River Restoration Program |

This appendix provides the theme and project-specific studies proposed for 2015 to support implementation of the San Joaquin River Restoration Program (SJRRP) (Table 1). These theme and project-specific studies are intended to inform certain actions identified in the Working Draft Framework for Implementation (SJRRP, 2012) through resolution of uncertainties and constraints. These provisional study plans will be updated on an annual basis and require review from the Monitoring and Analysis Plan Oversight Panel.

Study results and findings are reported at the biannually on the SJRRP Data Reporting web page (<http://restoresjr.net/flows/data-reporting>). Studies planned for 2015 are prioritized to support decisions on program actions, described in the Stipulation of Settlement in *NRDC, et al., v. Kirk Rodgers, et al.* (Settlement), Public Law 111-11, environmental compliance, and general Settlement implementation, as recommended by the Restoration Administrator (RA). Each study defines a process and provides rationale for identifying the types of information needed to support SJRRP decisions and actions, including actions such as modeling, monitoring, and analysis activities. Studies are developed with input from the Implementing Agencies (the U.S. Department of the Interior, Bureau of Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Department of Water Resources, and California Department of Fish and Wildlife), RA, stakeholders, and other technical specialists to define appropriate data requirements and study methods including both scope and accuracy of the study plans, to support decisions, and appropriate monitoring and/or analysis required to obtain the data.

Each study in this appendix is provided as a separate attachment.

Table 1.
2015 Monitoring and Analysis Plan Theme and Project-Specific Studies

| Study Number | Study | Contact |
|---------------------|--|--|
| 8 | Egg Survival and Emergence in Reaches 1A and 1B of the San Joaquin River | Zac Jackson, USFWS |
| 31 | The Effects of a Riparian Forest on Water Temperatures in the Restoration Area | Katrina Harrison, Reclamation / Erica Meyers, DFW / Carl Mesick, USFWS |
| 33 | Reducing Spring Water Temperatures below Sack Dam | Katrina Harrison, Reclamation / Erica Meyers, DFW / Carl Mesick, USFWS |
| 35 | Floodplain Production Study | Steve Blumenshine, CSU Fresno |
| 40 | San Joaquin River Spawning Habitat Suitability | Elaina Gordon, Reclamation / Blair Greimann, Reclamation |
| 43 | USGS Non-Structural Fish Passage | Marissa Wulff, USGS |
| 50 | Deriving Vegetation Characteristics from LiDAR Data and Two-Dimensional Hydraulic Modeling of the San Joaquin River Floodplain | Daniel Dombroski, Reclamation / Blair Greimann, Reclamation |
| 52 | Gravel Pit Delineation | Byron Willems, DWR |

Key:

CSU = California State University

DFW = California Department of Fish and Wildlife

DWR = California Department of Water Resources

LiDAR = Light Detection and Ranging

Reclamation = U.S. Department of the Interior, Bureau of Reclamation

USFWS = U.S. Fish and Wildlife Service

USGS = U.S. Geological Survey