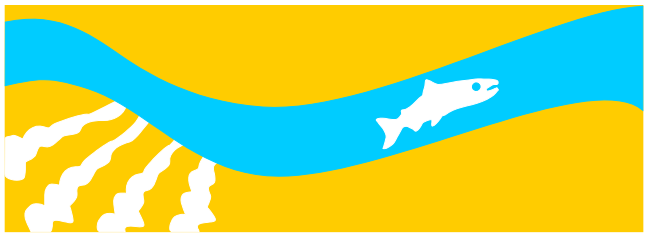
Appendix A

Studies

Public Draft
2013 Monitoring and Analysis Plan

SAN JOAQUIN RIVER
RESTORATION PROGRAM



September 2012

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1.0 Introduction

This appendix provides the studies planned for 2013 to support implementation of the San Joaquin River Restoration Program. Study results and findings are reported at the end of each year in the San Joaquin River Restoration Program Annual Technical Report. Studies planned for 2013 are prioritized to support decisions on program actions, described in the Stipulation of Settlement in *NRDC, et al., v. Kirk Rodgers, et al*, Public Law 111-11, environmental compliance, and general Settlement implementation, as recommended by the Restoration Administrator. Each study defines a process and provides rationale for identifying the types of information needed to support San Joaquin River Restoration Program 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 Game), Restoration Administrator, 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. Studies may be completed in 1 year or may span multiple years and would typically consist of monitoring or data gathering during a short-term period to address an uncertainty.

The Monitoring and Analysis Plan also presents studies that may be implemented in response to information needs identified in resource-specific Monitoring and Management Plans. The current role of the Monitoring and Management Plans is to identify information needs and describe specific knowledge gaps to be addressed through monitoring and studies. The Monitoring and Management Plans are intended to track long-term implementation approaches. The studies presented in this Monitoring and Analysis Plan are planned for 2013 and will be reported in the 2013 Annual Technical Report. The 2013 Annual Technical Report will also consist of updates to the Monitoring and Management Plans to reflect the current state of resource-specific knowledge. Site-specific project and agency actions will be described further based on their current status in the 2013 Annual Technical Report.

Each study in this appendix is provided as a separate attachment. Table A-1-1 lists the 2013 Monitoring and Analysis Plan studies.

Table A-1-1.
2013 Monitoring and Analysis Plan Studies

2013 MAP Appendix A Study	Study	Contact	2012 MAP Appendix A Section
1	Flow Gage Record Analysis	Katrina Harrison, Reclamation	2
2	Lateral Gradient of Water Table	Katrina Harrison, Reclamation	4
3	Changes in Soil Salinity Conditions Resulting from Interim Flows	Katrina Harrison, Reclamation	6
4	Influence of Paleochannels on Seepage	Katrina Harrison, Reclamation / Matt Burgess, USGS	-
5	Temperature Monitoring of the Cold Water Pool in Millerton Lake	Tracey Vermillon, Reclamation	23
6	Trap and Haul of Adult Fall Run Chinook	Matt Bigelow, DFG / Don Portz, Reclamation / Zac Jackson, USFWS	-
7	Juvenile Salmon Holding	Zac Jackson, USFWS / Paul Adelizi, DFG / Matt Bigelow, DFG	-
8	Egg Survival (Fall 2012)	Michelle Workman, USFWS	15
9	Fish Assemblage Inventory and Monitoring	Michelle Workman, USFWS / Don Portz, Reclamation	16
10	Juvenile Survival and Migration (year 3 – telemetry)	Michelle Workman, USFWS	17
11	Assessment of Predator Abundance and Distribution in Mine Pit Habitat in the San Joaquin River Restoration Area (ongoing)	Michelle Workman, USFWS	18
12	Fall-run Captive Rearing Study – Year 3	Paul Adelizi, DFG	19
13	Levee Geotechnical Exploration	Dave Encinas, DWR	-
14	Central Valley Steelhead Monitoring Plan	Don Portz, Reclamation	42
15	San Joaquin River PIT Tag Monitoring and Site-specific Technology Development	Don Portz, Reclamation / Michelle Workman, USFWS	40
16	Floodplain Quality	Elaina Gordon, Reclamation	-
17	Bed Material Data Processing and Evaluation	Elaina Gordon, Reclamation	45
18	Continuous Surrogate Measurement of Bedload Sediment Transport using Hydrophone Installations on the San Joaquin River, California	Mathiew Marineau, USGS / Toby Minear, USGS / Scott Wright, USGS	-
19	Two-Dimensional Temperature Modeling of Gravel Pits in Reach 1A	Elaina Gordon, Reclamation	48
20	Adult Passage	Amanda Peisch-Derby, DWR	49
21	USGS Sediment Monitoring	Al Caldwell, USGS	47

Table A-1-1.
2013 Monitoring and Analysis Plan Studies (contd.)

2013 MAP Appendix A Study	Study	Contact	2012 MAP Appendix A Section
22	USGS San Joaquin River Tributary Sediment and Geomorphology Study	Scott Wright, USGS / Toby Minear, USGS	46
23	Vegetation Monitoring	Greg Reed, Reclamation	9
24	Additional Water Level Recorders	Dave Encinas, DWR	29
25	Monitoring Cross-Section Resurveys	Dave Encinas, DWR	30
26	Effect of Altered Flow Regime on Channel Morphology in Reach 1A	Matthew Meyers, DWR	35
27	Effect of Scour and Deposition on Incubation Habitat in Reach 1A	Matthew Meyers, DWR	34
28	Reach 1A Spawning Area Bed Mobility	Matthew Meyers, DWR	33, 36
29	Thermal Conditions in Riverine Pools	Katrina Harrison, Reclamation	-

Key:
- = New study for 2013 MAP
DFG = California Department of Fish and Game
DWR = California Department of Water Resources
MAP = Monitoring and Analysis Plan
PIT = passive integrated transponder
Reclamation = U.S. Department of the Interior, Bureau of Reclamation
USFWS = U.S. Fish and Wildlife Service
USGS = U.S. Geological Survey

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