South Fork Kern River Monthly Measurement Report

Jul-21

Daily values in SFD = Second Foot Days, Monthly total in AF = Acre-Feet

Date	South Fork	D.Prince (4,5,17,20-22,37)			Hafenfeld (5)			RRBWSD (1,3,6,7,12, Wirth1, 30,33, Boone)			J.Nicoll (3)	Audubon (4,5,9,Wirth1,17,18) (20-22,Wirth2,27,29,37)		Smith (Smith)	Total Diverted	South Fork
	USGS - Onyx	Mill/Hillside	Miller	Prince	Miller	Landers	Cottonwood	Scodie/Mack	Landers	Nicoll	Nicoll	Cottonwood	Nicoll	Smith		Sierra Way "Flow"
1	4								*3.5*					*0.3*	4	Yes
2	4								*3.5*					*0.3*	4	Yes
3	4								*3.5*					*0.3*	4	Yes
4	3								*3.9*					*0.3*	4	Yes
5	3								*3.9*					0.0	4	Yes
6	3								*3.0*					0.0	3	Yes
7	3								*3.0*					0.0	3	Yes
8	3								*2.9*					0.0	3	Yes
9	3								*3.0*					0.0	3	Yes
10	3								*2.5*					0.0	3	Yes
11	3								*2.5*					0.0	3	Yes
12	3								*2.8*						3	Yes
13	3								*2.0*						2	Yes
14	3								*2.5*						3	Yes
15	3								*2.9*						3	Yes
16	3								*3.0*						3	Yes
17	3								*2.5*						3	Yes
18	3								*2.5*						3	Yes
19	3								*2.9*						3	No
20	3								*3.0*						3	No
21	3								*2.0*						2	No
22	3								*3.0*						3	No
23	3								*2.5*						3	No
24	3								*2.5*						3	No
25	3								*2.5*						3	No
26	3								*2.4*					*0.3*	3	No
27	3								*2.5*					*0.3*	3	No
28	4								*2.0*					*0.3*	2	No
29	3								*2.0*					*0.3*	2	No
30	4								*2.0*					*0.3*	2	No
31	4								*0.5*					*0.3*	1	No
SFD	96	0	0	0	0	0	0	0	83	0	0	0	0	3	86	
AF	191	0	0	0	0	0	0	0	165	0	0	0	0	6	170	
	3			**0**			**0**			**165**	**0**		**0**	**6**		

Note: Cottonwood via the Landers

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT - ONYX RANCH

MONTHLY GROUNDWATER MONITORING RUN

JUL

2021

Well Name	DATE	Depth to Water (ft)	Notes
Onyx Store - Domestic	7/30/2021	44.8	
Ranch HQ - Domestic	7:30/2021	18.7	
Landers Sand - Old Ag Well	7/30/2021	21.5	
Onyx Store - Old Ag Well	7/30/2021	22.4	
Mack Well	7/30/2021	89.1	running
Nicoll Field - Old Ag Well	7/30/2021	34.9	
Mack Field West - Domestic	7/30/2021	17	
Gibboney-2 Piezo	7/30/2021	9.9	
Gibboney-3 Piezo	7/30/2021	10	
Boone Piezo	7/30/2021	10.9	
Lieb Piezo	7/30/2021	9	
Pruitt Piezo	7/30/2021	16	
Scodie Well	7/30/2021	27.9	
Pruitt Well	7/30/2021	18.4	
Nicoll Well	7/31/2021	54.9	running
Mack Piezo	7/30/2021	19	

ONYX RANCH SOUTH FORK VALLEY WATER PROJECT

Mitigation Monitoring and Reporting Program

The Mitigation Monitoring and Reporting Program (MMRP) for the Onyx Ranch South Fork Valley Water Project (project) has been prepared in accordance with Public Resources Code Section 21081.6 and State CEQA Guidelines Section 15091(d). The Rosedale Rio-Bravo Water Storage District (RRBWSD) will use this MMRP to track compliance with the project mitigation measures. The RRBWSD will consider the MMRP during the certification hearing for the Final EIR. The MMRP incorporates all mitigation measures adopted for the project.

This MMRP provides the environmental topics with potential significant impacts and the mitigation measures identified in the same order as in the EIR. **Table 1** provides the MMRP, which includes the following information:

- **Mitigation Measures:** This column states the action(s) that will be taken to reduce impacts.
- **Monitoring Process:** This column outlines the appropriate steps to implement and verify compliance with the mitigation measures.
- **Monitoring Timing:** This column indicates the general schedule for conducting each monitoring task, such as prior to ground disturbance, during construction, after construction, prior to project initiation, and/or after project implementation or completion.
- **Responsible Agency/Entity:** This column lists the agency/entity responsible for ensuring implementation of the mitigation measure.
- **Verification of Compliance:** This column allows for documentation of date of implementation and the responsible party or person.

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE ONYX RANCH SOUTH FORK VALLEY WATER PROJECT

Mitigation Measures	Monitoring Process	Monitoring Timing	Responsible Agency/Entity	Verification of Compliance
Biological Resources				
BIO-1: Assessment and Monitoring Program: A qualified biologist shall prepare and implement a pre-project and post-project Assessment and Monitoring Program. The pre-project phase of the program shall confirm and update the existing baseline conditions and extents of the creeping rye grass turfs, red willow thickets, cattail marsh, mulefat thickets, and sandbar willow thickets within the potential impact area. The post-project phase of the program shall be developed to systematically monitor the condition of each of the aforementioned sensitive natural communities and riparian habitats located within the potential impact area to determine whether each sensitive natural community and/or riparian habitat is experiencing a level of disturbance as a result of the project implementation and operational activities. For the Assessment and Monitoring Program, the physical condition of each sensitive natural community and riparian habitat shall be documented during both the pre-project and post-project monitoring activities. Documentation shall include, but is not limited to: GPS mapping to monitor community extents, qualitative and quantitative vegetation analysis (including native and non-native cover), relevant groundwater data, and annual reporting. Vegetation analysis methods, including determination of the level of site disturbance, shall be conducted in accordance with accepted industry standards, such as the CDFW-CNPS Protocol for the Combined Vegetation Rapid Assessment (Rapid Assessment) and Relevé methods (CDFW, 2019b). Post-project monitoring activities shall continue for a period of 5 years, to be initiated one year following implementation of the project. Pre-project surveys and post-project monitoring documentation shall be submitted to and retained at the RRBWSD administrative office. The CDFW-CNPS Rapid Assessment/Relevé method of vegetation sampling includes the following standards for classifying disturbances from the reduction or elimination of surface water diversion (Disturbance Code 14) and other disturbances within the potential impact area: • Light: less than 33% of the stand is impacted. • Moderate: between 33% and 66% of the stand is impacted. • Heavy: more than 66% of the stand is impacted. If the assessment and monitoring program determines a Light, Moderate, or Heavy Disturbance (as defined in the CDFW-CNPS Rapid Assessment/Relevé methods) in the potentially impacted sensitive natural communities and/or riparian habitats identified, the area of impact shall be quantified through comparison with the established pre-project baseline conditions. For purposes of comparing post-project implementation conditions after the 5-year monitoring period with the pre-project baseline conditions, the impacts characterized as Light, Moderate, or Heavy Disturbance shall include: • Light: less than 33% of sample plots averaged over the 5-year monitoring period show a 20% or greater reduction in absolute native cover of the sensitive natural community and/or riparian habitat	• Retain a qualified biologist to prepare and implement a pre-project Assessment and Monitoring Program, including mitigation options, as necessary	• Prior to ground-disturbing activity	• RRBWSD	
	• Retain a qualified biologist to prepare and implement a post-project Assessment and Monitoring Program, including mitigation options, as necessary	• One year after project implementation for up to five years	• RRBWSD	
	• Retain copies of all documentation and reports in project file	• Before and after project implementation	• RRBWSD	

Mitigation Measures	Monitoring Process	Monitoring Timing	Responsible Agency/Entity	Verification of Compliance
• Moderate: between 33% and 66% of sample plots averaged over the 5-year monitoring period show a 20% or greater reduction in absolute native cover of the sensitive natural community and/or riparian habitat • Heavy: more than 66% of sample plots averaged over the 5-year monitoring period show a 20% or greater reduction in absolute native cover of the sensitive natural community and/or riparian habitat If the monitoring biologist determines that extraneous factors (i.e., drought, non-project-related anthropogenic influences, other uncontrollable factors) could have adversely influenced absolute native cover of the sensitive natural community and/or riparian habitat during the 5-year monitoring period, or additional groundwater level data is needed to draw conclusions regarding observations of adverse habitat impacts related to groundwater levels, the monitoring period may be extended at the monitoring biologist's discretion to account for these factors. At the conclusion of the monitoring period, impacts evaluated in terms of Light, Moderate, or Heavy Disturbance shall be mitigated as described below. **Mitigation Options:** For impacts to creeping rye grass turfs, red willow thickets, cattail marsh, mulefat thickets, or sandbar willow thickets, the RRBWSD shall provide one or a combination of the following mitigation options unless the habitat is occupied by tri-colored blackbird (which would be mitigated in accordance with BIO-2). The timing of implementation shall depend on if and when adverse impacts to these habitats are observed to be attributable to changes in surface water or groundwater conditions, and may be implemented prior to or at the end of the monitoring period. 1. No mitigation required for Light Disturbance. 2. On- and/or off-site preservation, creation, restoration, and/or enhancement of sensitive natural communities or riparian habitat at a ratio no less than 1:1 for Moderate Disturbance impacts, and no less than 2:1 for Heavy Disturbance impacts. A habitat mitigation plan (HMP) shall be developed to include information on site selection, grading and site preparation, seeding and planting plans, irrigation, maintenance and monitoring activities, success criteria, adaptive management/contingency measures, and provisions for site preservation and long-term management. The HMP shall focus on the preservation, creation, restoration, and/or enhancement of equivalent habitats within suitable habitat areas of the project site and/or off-site. 3. The purchase of mitigation credits from an approved mitigation bank at a ratio of no less than 1:1 for Moderate Disturbance and no less than 2:1 for Heavy Disturbance. 4. Returning flows to the agricultural ditches and fields in areas where Moderate or Heavy Disturbance impacts to any of the natural communities identified above supported by those ditches or fields are observed during monitoring.				

Mitigation Measures	Monitoring Process	Monitoring Timing	Responsible Agency/Entity	Verification of Compliance
BIO-2: Prior to implementation of the proposed project, a qualified biologist shall conduct surveys for the tri-colored blackbird throughout the cattail marsh, mulefat thickets, sandbar willow thickets, and tamarisk thickets within the potential impact area, and submit a report to the RRBWSD of survey findings. The report shall be submitted to and retained at the RRBWSD administrative office. If tri-colored blackbirds are not detected within the suitable breeding habitat, no further action is necessary. If tri-colored blackbirds are observed nesting within the potential impact area, for a period of 5 years, an annual focused survey shall be conducted for the tri-colored blackbird within the areas of occupied habitat to monitor for the continued use of the occupied habitat for nesting. The quality and quantity of the occupied habitat also shall be monitored in accordance with the Assessment and Monitoring Program identified in Mitigation Measure BIO-1. The annual survey and monitoring data shall be submitted for a period of 5 years and retained at the RRBWSD administrative office. If the annual focused surveys reveal the nesting colony is no longer utilizing occupied habitat and there is a decline in the occupied habitat quality based on disturbance levels defined in Mitigation Measure BIO-1 or decline in quantity from the pre-project baseline conditions, the tri-colored blackbird nesting habitat shall be replaced at a ratio of 2:1. The replacement habitat shall be suitable to support tri-colored blackbird breeding habitat with similar nesting and foraging habitat functions as is provided by the existing habitat.	• Retain a qualified biologist to conduct pre-implementation surveys for tri-colored blackbird	• Prior to ground-disturbing activity	• RRBWSD	
	• If species are observed nesting, conduct annual focused surveys	• If needed, up to 5 years after project initiation	• RRBWSD	
	• If species decline as a result of the project, replace habitat at a 2:1 ratio	• If needed, after annual focused surveys for up to 5 years	• RRBWSD	
	• Retain copies of all surveys and reports in project file	• Before/ during/ after project implementation	• RRBWSD	
BIO-3: Prior to implementation of the proposed project, a qualified biologist/botanist shall conduct a focused special-status plant survey throughout the creeping rye grass turfs for alkali mariposa lily during the appropriate blooming period (April - June) to determine the presence/absence of the species. If the species is detected, the population shall be mapped and demarcated. If through the implementation of Mitigation Measure BIO-1 (post-project Assessment and Monitoring Program) it is determined that the creeping rye grass turfs are declining or being reduced as a result of the project implementation and may result in reduction in the alkali mariposa lily, one or a combination of the following methods shall be implemented: 1. Onsite and/or off-site translocation of surviving alkali mariposa lily bulbs to suitable habitat preserved through a conservation easement. Translocation shall occur at the end of the dormant season (summer) and prior to the forecast of initial fall rains. 2. Seed collection and propagation for at least two-years old bulbs to be planted prior to the forecast of initial fall rains into suitable habitat preserved through a conservation easement. 3. Payment into a mitigation bank or through an established in-lieu fee program specific to the conservation of alkali mariposa lily. The selected method shall be incorporated into the pre-project and post-project Assessment and Monitoring Program required by Mitigation Measure BIO-1. Survey and monitoring data shall be submitted to and retained by the RRBWSD administrative office.	• Retain a qualified biologist/ botanist to conduct focused special-status plant survey	• Prior to ground-disturbing activity from April – June	• RRBWSD	
	• If species are detected, population shall be mapped	• Prior to ground-disturbing activity	• RRBWSD	
	• If species decline as a result of the project, conduct one of three mitigation options	• If needed, at conclusion of post-project Assessment and Monitoring Program (BIO-1)	• RRBWSD	
	• Retain copies of all surveys and reports in project file	• Before/ during/ after project implementation	• RRBWSD	

Mitigation Measures	Monitoring Process	Monitoring Timing	Responsible Agency/Entity	Verification of Compliance
BIO-4: The Assessment and Monitoring Program and mitigation requirements outlined in Mitigation Measure BIO-1 shall apply to salt grass flats within the potential impact area.	• For salt grass flats within the potential impact area, retain a qualified biologist to prepare and implement a pre-project Assessment and Monitoring Program, including mitigation options, as necessary	• Prior to ground-disturbing activity	• RRBWSD	
	• For salt grass flats within the potential impact area, retain a qualified biologist to prepare and implement a post-project Assessment and Monitoring Program, including mitigation options, as necessary	• After project implementation	• RRBWSD	
	• Retain copies of all documentation and reports in project file	• Before and after project implementation	• RRBWSD	
Cultural Resources				
CUL-1: Retention of Qualified Archaeologist and Avoidance of Prehistoric Sparse Lithic Scatter (P-15-013792). The RRBWSD shall retain a Qualified Archaeologist that meets the minimum professional qualifications standards (PQS) set forth by the Secretary of the Interior (SOI) (codified in 36 Code of Federal Regulations [CFR] Part 61; 48 FR 44738-44739) to oversee the construction monitoring activities for the cultural resources work associated with the proposed project. Prior to the siting of any shallow, low-volume well components in or adjacent to the agricultural field where the prehistoric sparse lithic scatter (P-15-013792) occurs, the Qualified Archeologist shall map the prehistoric sparse lithic scatter location with a buffer around the site perimeter. The map shall be used to determine the area of avoidance for the prehistoric sparse lithic scatter (P-15-013792) during any activities associated with the drilling and construction of the shallow, low-volume wells (including well pad location, materials and equipment staging area, and the dirt access road to be used). The map of the prehistoric sparse lithic scatter (P-15-013792) with the buffer area shall be included in the confidential cultural resources report to be retained on file at the RRBWSD administrative office.	• Retain a qualified archaeologist to oversee the construction monitoring activities	• Prior to and during ground-disturbing activities	• RRBWSD	
	• Retain qualified archaeologist to map the prehistoric sparse lithic scatter (P-15-013792) location with a buffer around the site perimeter	• If needed, prior to siting of any shallow, low-volume well components in or adjacent to the agricultural field where the prehistoric lithic scatter occurs	• RRBWSD	
	• Retain copies of all documentation and reports in project file	• Before and during project implementation	• RRBWSD	

Mitigation Measures	Monitoring Process	Monitoring Timing	Responsible Agency/Entity	Verification of Compliance
CUL- 2: Archaeological Monitoring and Unanticipated Discoveries. All ground disturbing activities associated with the installation of the shallow, low-volume wells shall be monitored by an archaeological monitor working under the direction of the Qualified Archaeologist. In the event of the unanticipated discovery of archaeological materials, the contractor shall immediately cease all work activities at the well site and within 100 feet of the discovery until it is evaluated by the Qualified Archaeologist. Construction shall not resume until the Qualified Archaeologist has conferred with the RRBWSD and the appropriate Native American representatives (if the find is of Native American origin) on the significance of the resource as an historical resource or as a unique archaeological resource. Based on the determination of the significance of the discovery, the RRBWSD shall implement a strategy for avoidance and preservation in place. A Treatment Plan to implement the avoidance and preservation in place shall be prepared and, after approval by the RRBWSD, shall be implemented under the direction of the Qualified Archaeologist. The Treatment Plan and associated documentation shall be retained at the RRBWSD administrative office.	• Retain an archaeological monitor to conduct monitoring of all ground disturbance associated with the installation of the shallow, low-volume wells	• Prior to construction of shallow, low-volume wells	• RRBWSD	
	• Halt work within 100 feet if an archaeological resource is found	• If needed, during construction of shallow, low-volume wells	• Construction contractor	
	• If any resources are found, implement a strategy for avoidance and preservation in place, and retain a qualified archaeologist to prepare a Treatment Plan	• If needed, during construction	• RRBWSD	
	• If any resources are found, document and retain records regarding discovery of archaeological resources	• If needed, after construction	• RRBWSD	
CUL-3: Human Remains Discovery. If human remains are encountered, all work in the vicinity (within 100 feet) of the find shall cease and the County Coroner shall be contacted in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American in origin, the Native American Heritage Commission (NAHC) shall be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains per PRC Section 5097.98. Until RRBWSD has conferred with the MLD, the immediate vicinity where the discovery occurred shall not be disturbed by further activity and shall be adequately protected according to generally accepted cultural or archaeological standards or practices, taking into account the possibility of multiple burials.	• If human remains are encountered, halt work within 100 feet of discovery, coordinate with County Coroner, and contact the NAHC if applicable	• If needed, during construction	• RRBWSD	
	• NAHC shall notify most likely descendant, if applicable	• If needed, during construction	• NAHC	
	• Document and retain records regarding discovery of human remains in project file	• If needed, during and after construction	• RRBWSD	

Mitigation Measures	Monitoring Process	Monitoring Timing	Responsible Agency/Entity	Verification of Compliance
Geology and Soils (Paleontological Resources)				
GEO-1: Prior to the start of drilling activities for each new shallow, low-volume well on the project site that would occur in an area with older alluvium, a Qualified Paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards (Qualified Paleontologist) shall be retained by the RRBWSD. The Qualified Paleontologist shall be responsible for oversight of: monitoring activities during well drilling activities; sediment sampling, and collection, identification; and final disposition of identified fossils. The steps to be taken are as follows: The paleontological resources monitoring shall be conducted for all ground-disturbing activities for well drilling at depths greater than 5 feet. The monitoring shall be performed by a qualified paleontological monitor under the direction of the Qualified Paleontologist. The monitor shall recover sediment samples from each 5-foot interval and prepare a daily log detailing the type of drilling activities, soils observed at various depths, and any discoveries recovered. The sediment samples recovered from each 5-foot interval shall be screened onsite or elsewhere and the resulting concentrate shall be sorted using a binocular microscope. Any significant fossils collected shall be prepared to the point of identification and curated into an accredited repository with retrievable storage. If caliche materials are recovered from the sediment samples, a radiocarbon date shall be obtained. The Qualified Paleontologist shall prepare a final monitoring and mitigation report for submittal to the RRBWSD in order to document the results of the monitoring effort and any discoveries. If there are significant discoveries, fossil locality information and final disposition shall be included with the final report that will be submitted to the appropriate repository and the RRBWSD.	• Retain a Qualified Paleontologist to oversee monitoring activities during well drilling activities	• Prior to drilling for all shallow, low-volume wells	• RRBWSD	
	• Retain a Qualified Paleontologist to conduct sediment sampling	• During drilling for all shallow, low-volume wells	• RRBWSD	
	• Retain a Qualified Paleontologist to conduct sediment collection and identification	• During/after drilling for all shallow, low-volume wells	• RRBWSD	
	• Retain a Qualified Paleontologist to conduct prepare monitoring report and conduct final disposition of identified fossils	• After drilling for all shallow, low-volume wells	• RRBWSD	
	• Retain copies of all surveys and reports in project file	• During and after drilling for all shallow, low-volume wells	• RRBWSD	