

**PROJECT RECOVERY OPERATIONS PLAN REGARDING
PIONEER PROJECT, ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT,
AND KERN WATER BANK AUTHORITY PROJECTS**

Purpose:

The Kern County Water Agency, on behalf of itself and the Pioneer Project Recovery Participants, Rosedale- Rio Bravo Water Storage District, and the Kern Water Bank Authority (the Parties) have developed this Operating Plan to designate measures, consistent with the MOUs¹ governing their respective projects, to “... *prevent, eliminate or mitigate significant adverse impacts*” resulting from project recovery operations. This plan applies to all recovery programs undertaken by any of the Parties’ projects that are governed by MOUs. Pioneer mitigation includes the Pioneer Project, Berrenda Mesa Banking Project and Improvement District No. 4’s Allen Road well field. This plan applies to landowners using groundwater for overlying agricultural or domestic uses as of the date this plan is executed. It does not apply to wells installed after the date of this plan that are installed to unsuitable depths based on historic water level fluctuations.

Plan Components:

1. Establish a Joint Operations Committee (JOC):

- a. Representatives from each of the Parties will participate in the JOC. Each Party will have equal representation on the JOC and an equal voice in its determinations, except that with respect to claims made to the JOC, only those parties contributing to mitigation will have a vote in determinations made on such claims.
- b. The JOC will meet as needed during years in which recovery operations are occurring (or expected to occur) to evaluate groundwater conditions, model results, landowner claims, and any other topics of concern. It is expected that the JOC will meet at least monthly during years when recovery operations are occurring.
- c. The JOC may establish a technical subcommittee to assist with compiling information to use in evaluating claims.
- d. The JOC will evaluate all claims with respect to model results and other appropriate information and the triggers established in Section 3, and approve or reject such claims. If claims are approved, appropriate mitigation will be determined as further described in Section 3. If mitigation is provided, the JOC will fund and/or contribute to the actions as described in Section 4.

¹ MOU refers to all of those MOUs executed by the parties that contain terms substantially similar to the *Memorandum of Understanding Regarding Operation and Monitoring of the Kern Water Bank Groundwater Banking Program* (dated October 26, 1995).

2. Evaluate Groundwater Conditions

- a. The Parties have developed groundwater models (AMEC and Harder) as a tool to evaluate With Project versus Without Project groundwater levels and predict potential groundwater impacts. The Parties shall mutually agree on the assumptions used for Without Project conditions, and for purposes of making determinations hereunder an average of the output for the two models shall be utilized. The Pioneer Without Project condition shall assume farming is continued on its footprint.
- b. The models will be updated regularly (at least annually) and compared to actual conditions during years in which recovery occurs. The Parties shall mutually cooperate to attain all data necessary for such updates. The Parties will utilize the water quality and water level monitoring data collected by the Kern Fan Monitoring Committee, and may conduct additional monitoring as needed. The Parties will report the results of the modeling to their respective Boards of Directors and shall publish on their respective websites maps and data showing current and projected water level information in the general area of the projects. As a matter of practice, the Parties will use the best and latest science and information available in all modeling and technical matters.
- c. Absent unanimous approval of the JOC, recovery in any calendar year beyond March 15 of that year shall not commence (or continue) until the Models have been run for the projected operations and the Committee has met to review the results.²
- d. The Models will be used to:
 - i. Forecast With Project and Without Project groundwater levels at the outset of recovery programs.
 - ii. Forecast any localized areas for special attention and/or monitoring.
 - iii. Attempt to identify domestic wells at risk of impacts.
 - iv. Determine if mitigation triggers have been met (See Section 3b).
- e. The Parties may, based on experience gained, select a mutually agreeable groundwater model capable of accurately predicting groundwater impacts resulting from project operations.
- f. In case of a dispute concerning a technical issue with a model, such as data inputs or the results based thereon, the Parties shall consult with a third party to resolve the matter.

3. Triggers and Actions

- a. These actions will not occur in years when average water levels (measured at the following wells: 29S/25E-25M1&2, 29S/26E-31H1&2, 29S/26E-34M1, and 29S/26E-35H) are less than 140 feet from the surface as measured on March 31 of a given year

² Model data for a preceding year becomes available at different times in the following year. Modeling at the beginning of any given year will necessitate estimating certain model input data for the preceding year (e.g. Kern River losses). These estimates will be replaced with actual data at regular intervals when the model is updated.

because it is expected that water levels will not decline during such year to an extent resulting in a mitigatable impact.

- b. The trigger for whether mitigation is considered shall be based upon an analysis and comparison of Model generated Without Project conditions to Model generated With Project conditions. When the With Project conditions are fifteen (15) or forty-five (45) feet deeper than the Without Project conditions at any operative domestic or agricultural well, respectively, and mechanical failure or other operational problems have occurred or are reasonably likely to occur due to declining water levels, mitigation will be provided as described below.
- c. To be eligible for mitigation as provided below, the affected landowner shall allow the JOC (or representatives thereof) to perform a field inspection as described in 3.d. below, and provide claim information concerning the condition of the well and casing and pumping equipment, as determined appropriate by the JOC. The JOC shall evaluate all submitted claims within forty-five (45) days of receipt, provided that the landowner cooperates with the collection of necessary information. All mitigation actions are contingent upon the claimant executing an appropriate release, the terms of which will depend upon the nature of the mitigation provided.
- d. For all claims, a field inspection will be conducted with the consent and coordination of the landowner to determine static depth to groundwater levels within the well and verify well construction information and pump setting information, if possible.
- e. Well construction information and pump setting information will be compared to Model projected pumping water levels to determine pump submergence levels and evaluate the necessity and feasibility of mitigation measures. Mitigation measures, if warranted, will include one or more of the following:
 - i. Providing a short-term emergency water supply to domestic well owners. Short-term emergency supplies shall be provided as soon as reasonably possible, but in all cases within 14 days of notification to the JOC of such needs;
 - ii. Providing funds to lower a well pump;
 - iii. Providing funds to complete a connection to an M&I water provider;
 - iv. Supplying an equivalent water supply from an alternate source;
 - v. Providing funds to replace the affected well with a deeper well that meets Kern County well ordinance standards;
 - vi. Reducing or adjusting recovery pumping as necessary to avoid the impact; or
 - vii. With the consent of the affected landowner, providing other acceptable mitigation.
- f. Mitigation will not be provided where it can be demonstrated that the affected well requires remediation for reasons other than temporary groundwater level declines resulting from Project operations (i.e., general overdraft conditions, lack of well maintenance, normal wear and tear, failure of well equipment, etc.).

4. Mitigation Funding

- a. It is the intent of the Parties to mitigate and/or compensate for legitimate Project impacts; it is not the intent of the Parties or the Plan to generate a windfall for landowners. Accordingly, adjustments will be made for depreciation of existing equipment and landowner contributions based on betterment for all mitigation measures. See Exhibit A for an example of such adjustments.
- b. All costs paid, water supplies provided, and/or pumping reductions used by the Parties to prevent, eliminate or mitigate claimed impacts at a well site shall be initially allocated among the parties according to their respective projects' proportionate contributions to the With Project water level as compared to Without Project water level, as determined by using an average of the most recent versions of the models. After years end, the models shall be updated with the actual operations data for that year and recalibrated, and the average of the results of such modeling shall be used for a final allocation of the projects' proportionate contributions levels. If appropriate, the parties shall exchange funds and/or water supplies among them in accordance with the final allocation. For administrative ease, only an initial and final allocation for a given year shall be required. This procedure shall apply to mitigation for both domestic and agricultural wells.
- c. All costs expended by any Party for equipment, water supplies or labor that is/are purchased or provided to address emergency health and safety concerns at domestic wells (exclusive of the costs described in 4.b. above) shall initially be allocated equally between the Parties. These costs shall be reallocated among the parties after years end per the procedure described in 4.b. above, provided that only those domestic wells for which emergency health and safety costs were incurred by a party shall be included in such reallocation, and further provided that the projects' proportionate contribution levels shall be based on the melded average of the results of the reallocation at all of the wells included in the reallocation.
- d. All costs expended by any JOC participant in the administration of the JOC on behalf of all participants (e.g., processing claim response letters, calls from claimants, postage, notary public services, etc.) shall initially be allocated equally between the Parties. These costs shall be reallocated after years end per the procedure described in 4.b. above.

5. Additional Actions and Miscellaneous.

- a. The term of this Operations Plan shall commence on February 1, 2017, and shall terminate on January 31, 2019. The Parties may agree to extend this Operations Plan and will meet starting October 1, 2018 to discuss any extension.
- b. Modification language - This Operations Plan may not be altered, amended, or modified in any respect, except by unanimous consent of the Parties. Any modification to this Operations Plan must be made in writing and executed by all the Parties.

- c. Except as set forth below, in the event the Joint Operations Committee cannot agree on (1) the implementation of this agreement, or (2) the proper action in response to a landowner claim, such dispute shall be submitted to binding arbitration before a single neutral arbitrator appointed by the Parties, and in absence of such consent, appointed by the presiding judge of the Kern County Superior Court. Any arbitrator selected by the parties shall have experience arbitrating groundwater disputes. The arbitration shall be called and conducted in accordance with such rules as the Parties shall agree upon, and in the absence of such agreement, in accordance with the procedures set forth in California Code of Civil Procedure section 1282, et seq. Notwithstanding the foregoing, in any arbitration the Parties agree that discovery will be allowed pursuant to Code of Civil Procedure section 1283.05. The Parties shall attempt to jointly appoint the neutral arbitrator within ten (10) days after a dispute arises, and in the event the Parties cannot agree to a neutral arbitrator within said ten-day period, either Party may make a request to the presiding judge of the Kern County Superior Court immediately thereafter. In the event a landowner submits a claim and the Joint Operations Committee cannot agree on the proper action in response, the arbitration requirement shall be contingent upon the landowner's express written consent to proceed and be bound by arbitration and to pay his/her/its proportionate share of arbitrator fees and related costs. Absent such landowner consent, there shall be no obligation on the part of either Party to arbitrate any such dispute.
- d. With respect to the interpretation and enforcement of this Plan, and with respect to the resolution of any matter left for future determination or implementation, the Parties agree to carry out such duties and responsibilities in good faith and in cooperation with one another, to the end that the objectives and purposes of this agreement will be achieved and/or carried out to the greatest extent practicable.

APPROVED this ____ day of _____, 2017

“PARTIES”

**KERN COUNTY WATER AGENCY, on behalf of itself and
the Pioneer Project Recovery Participants**

By:  _____

KERN WATER BANK AUTHORITY

By: _____

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

By: _____

A handwritten signature in blue ink, consisting of a large, stylized 'R' followed by a series of loops and a long horizontal stroke.

Joint Operations Committee
Well Cost Alternatives Worksheet

Date: October 13, 2015
Case No. 15-017
Name: Ross Johnson

A. Notes:

1. Pump was lowered in 2015.
2. Pump was pulled in October 2015 and found to be sanded up. (ME Beggs Invoice)
3. Bottom of well was tagged in October 2015 at 288 ft or 6 ft shallower than a year ago. (ME Beggs Invoice)
4. Casing is flaking off (ME Beggs Invoice)

B. Exhibit A Analysis:I. Pump Capacity Analysis:

Required Pump Flow Rate (Estimated)		10 GPM
Measured Pump Flow Rate (Estimated)		0 GPM
Difference		10 GPM
Adequate Capacity	Yes <u> </u> No <u> </u> X <u> </u>	

II. Pump Setting Analysis:

Depth of Casing:		288 Ft
Depth to Water (Static)		222 Ft
Depth to Pumping Water Level (Estimated)		231.5 Ft
Drawdown		9.5 Ft
Pump Setting		284 Ft
Pump Submergence		52.5 Ft
Adequate Submergence	Yes <u> </u> X <u> </u> No <u> </u>	
Projected static depth to water level (From Study)		250 Ft
Drawdown		9.5
Required Submergence		50
Projected 10 Year Casing Setting		175
Modified Pump Setting		485 Ft
Existing Casing Depth		288 Ft
Modified Pump Setting		485 Ft
15 feet minimum pump clearance.		15 Ft
Required casing depth in ten years		500 Ft
Existing Casing Depth below Required Casing Depth		(212) Ft
Adequate Clearance	Yes <u> </u> No <u> </u> X <u> </u>	

C. Well Replacement AnalysisWell Replacement Depreciation Analysis:

Existing well casing - Expected Life	50 Years
Existing well casing - Age	38
Existing well casing - Expected Remaining Life (Casing has failed)	0
Existing pump -- Expected Life	15 Years
Existing pump - (Pump replaced in July 2015)	0
Existing pump - Expected Remaining Life	15
<i>Note: In some cases, existing column, tube, shaft and motor should also be evaluated, or included with Existing pump.</i>	

Facility Remaining Replacement Cost Analysis:

	Cost	Cont. Amount	Total
Drilling and casing cost for new well.	90,000	9,000	\$99,000
Purchase and installation of new pumping equipment.	5,000	500	\$5,500
Salvage Value			\$0
Total:			\$104,500

Unit Well Replacement Cost	\$99,000 /	500 FT =	\$198 /FT
Existing Well - Replace Cost	\$198 /FT x	288 FT =	\$57,024
Existing Well - Depreciated Value			\$57,024
Existing Well - Remaining Value			0
New Well - Incremental Cost	\$198 /FT x	212 FT =	\$41,976
Action Fund Mitigation Cost			\$41,976

Unit Pump Replacement Cost	\$5,500 /	485 FT =	\$11 /FT
Existing Pump - Replace Cost	\$11 /FT x	284 FT =	\$3,224
Existing Pump - Depreciated Value			0
Existing Pump - Remaining Value			\$3,224
New Pump - Incremental Cost	\$11 /FT x	201 FT =	\$2,276
Action Fund Mitigation Cost			\$5,500

Facility Replacement Cost Summary:

Owner Cost for Facility Replacement	\$57,024
Action Fund Cost for Facility Replacement	\$47,476
Total Replacement Cost	\$104,500

D. Cost Alternative Summary:

1) Cost to drill new well to a depth of 495 ft.	\$99,000
2) Incremental cost to drill new well from 288 ft down to 495 ft.	\$41,976
3) Drill New Well & Provide Pump (Full Cost)	\$104,500

E. Action Fund Cost

Exhibit A - Incremental cost to drill new well from 288 ft down to 495 ft and lower pump from 284 ft to 485 ft.	\$47,476
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