

**Long-Term Project Recovery Operations
Plan Regarding Kern Water Bank Authority
Project (2016)**

**LONG-TERM PROJECT
RECOVERY OPERATIONS PLAN
REGARDING KERN WATER BANK AUTHORITY PROJECT**

Purpose.

Consistent with Kern Water Bank Authority’s (KWBA) Memorandum of Understanding governing its banking project (MOU), this Long Term Operations Plan Regarding Kern Water Bank Authority (“Plan”) designates specific measures to be employed to “... *prevent, eliminate or mitigate significant adverse impacts*” resulting from project operations. KWBA will carry out its duties and responsibilities under this Plan in good faith and in cooperation with Adjoining Entities to the end that the objectives and purposes of this Plan will be achieved and/or carried out to the greatest extent practicable.¹ This plan applies to neighboring landowners currently using groundwater for overlying uses from an agricultural supply or domestic well. It does not apply to new wells that are installed to unsuitable depths based on historic water level fluctuations.

Plan Components:

A) Monitor and Report Groundwater Conditions to KWBA’s Board of Directors and the Public.

- 1) KWBA will monitor groundwater levels monthly, except during periods of no recovery when monitoring will occur at least quarterly. KWBA may rely on monitoring conducted by the Kern Fan Monitoring Committee to meet these requirements.
- 2) KWBA will report current groundwater levels to its Board of Directors at each monthly regular meeting, and will make the reports available to the public on its website (<http://www.kwb.org/>).
- 3) KWBA will regularly update its Groundwater Model (Model) to actual conditions and use the Model to project future groundwater conditions. KWBA will endeavor to use the best practicable science and latest information available in all modeling and technical matters. KWBA will report the results of its modeling to its Board of Directors and will make the results available to the public on its website (<http://www.kwb.org/>). Recovery in any calendar year beyond March 15 of that year shall not commence (or continue) until the Model has been run for projected operations and the results have been reported to the Board and made available to the public.²

B) Implement Proactive Measures (in addition to A. above).

- 1) KWBA will use its Model as a tool to evaluate potential groundwater impacts

¹ Rosedale Rio Bravo Water Storage District (Rosedale) has proposed and adopted a similar plan to prevent, eliminate or mitigate potential impacts from their projects, which plan is part of their Stockdale Integrated Banking Project Draft Environmental Report dated April, 2015. KWBA expects that an agreement will be developed with Rosedale and others for the coordinated implementation of long-term banking operations plans.

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.

resulting from its project operations. The Model will be periodically run and updated as projected recovery plans become known or change and the Model will assume such conditions as described in A)3).

- 2) The Model will be used to:
 - a) Forecast groundwater levels.
 - b) Forecast and predict the contribution of KWB operations to groundwater level declines in the area.
 - c) Determine water level conditions with “Without KWB Operations” for purposes of evaluating the potential impact of “With KWB Operations.” The “Without KWB Operations” condition is the water level that would have been at any particular well location absent “KWB Operations.”
 - d) Identify, based upon an analysis of “Without KWB Operations” versus “With KWB Operations,” if a **negative potential impact (“NPI”)** has or is likely to occur for which the measures described at D, E, and F may be operative. NPI is determined according to C)1) below.
 - e) Forecast any localized areas for special attention and/or additional monitoring, where groundwater levels will decline 30 or more feet below the “Without KWB Operations” groundwater level.
 - f) Identify wells at risk of potential impacts during recovery operations.
- 3) KWBA will provide notification on its website if the Model shows that an **NPI** has or is likely to occur, including steps that potentially affected landowners must follow if the landowner desires to make a claim to KWBA regarding potential well impacts due to KWBA’s recovery operations.

C) Implement Triggers and Actions.

The actions described in sections D, E, and F, will be implemented in consultation with affected landowners/well owners that make a claim to KWBA regarding well impacts relating to KWBA’s recovery operations and groundwater level declines, subject to the following:

- 1) The trigger for mitigation shall be based upon an analysis and comparison of Model generated “Without KWB Operations” versus “With KWB Operations.” When “With KWB Operations” are 30 feet deeper than the “Without KWB Operations” at an operative well, and the well has (or is expected to) experience mechanical failure or other operational problems due to declining water levels, a negative potential impact (“NPI”) is triggered.
- 2) For a well owner to be eligible for mitigation as provided below, the affected landowner shall submit a claim to KWBA, in accordance with the Government Claims Act, which shall, at a minimum, provide information concerning the condition of the well and casing and pumping equipment of the well, and other information that is relevant to the landowner’s claim. Upon receipt of a claim, KWBA shall use the Model (or the results of modeling as reported to the Board and the public) to determine whether an NPI exists at the landowner’s well and respond with the appropriate action described below.
- 3) KWBA will provide mitigation and/or compensation for the KWB operations’ contribution to the adverse impact. Mitigation and/or compensation is not required for a well owner’s lack of well maintenance, normal wear and tear, depreciation, failure of well equipment, well casing degradation, etc., or other reasons not relating to KWB

operations.

D) Implement Action for Agricultural Wells When Well Adjustment Is Needed and Available

- 1) Trigger: When the Model predicts NPI for an operational agricultural well outside the current operating range of the pump but within the potential operating range of the well.
- 2) KWBA actions will be completed within 60 days (provided that the land/well owner cooperates) from receipt of a claim as follows:
 - a) Field verify (with the affected landowner if requested) static depth to groundwater levels within the well and compare to Model values to determine if flow stoppage is due to groundwater level decline due to KWB operations. If needed:
 - (1) Obtain right of entry permit and well data release from well owner.
 - (2) Collect pump manufacturer data, the in-situ pump setting, and casing depth information.
 - b) Compare pump setting information with Model projected pumping water levels throughout the year to determine pump submergence levels and evaluate the necessity and feasibility of lowering the well pump to meet the landowner's needs to provide the least-cost short- and long-term solution.
 - c) Develop a cost estimate to complete the necessary work.
 - d) Develop and submit a report to the landowner informing the landowner of the findings and proposed actions, including denying the claim because groundwater declines are not due to KWB operations.
- 3) At KWBA's option, it may reduce or adjust pumping of its wells as necessary to prevent avoid, or eliminate the NPI, using the Model to identify the well or wells that may require reduction or adjustment in pumping.
- 4) If groundwater declines are due to KWB operations, unless KWBA implements D)3), once agreement is reached between KWBA and the landowner pursuant to D)2)b) and all cost estimates have been completed, pay costs associated with the landowner claim (considering C)3) above), including the cost to complete the necessary work.

E) Action for Ag Wells – Well Adjustment Unavailable

- 1) Trigger: When the Model predicts NPI for an operational agricultural well outside the current and potential operating range of the well.
- 2) KWBA actions will be completed within 60 days (provided that the land/well owner cooperates) from receipt of a claim as follows:
 - a) Field verify (with the affected landowner if requested) static depth to groundwater levels within the well and compare to Model values to determine if flow stoppage is due to groundwater level decline due to KWB operations. If needed:
 - (1) Obtain right of entry permit and well data release from well owner.
 - (2) Collect pump manufacturer data, the in-situ pump setting, and casing depth information.
 - b) Identify water of an equivalent water quantity and quality suitable for agricultural uses for the affected landowner from an alternate source at no greater cost to the affected landowner or, with the consent of the affected landowner, identify acceptable mitigation (for example, drill and equip a new well) to provide the least-cost short- and

- long-term solution, including an estimate to complete the necessary work.
- c) Develop and submit a report to the landowner informing the landowner of the findings and proposed actions, including denying the claim because groundwater declines are not due to KWB operations.
 - 3) At KWBA's option, it may reduce or adjust pumping of its wells as necessary to prevent avoid, or eliminate the NPI, using the Model to identify the well or wells that may require reduction or adjustment in pumping.
 - 4) If groundwater declines are due to KWB operations, unless KWBA implements E)3), once agreement is reached between KWBA and the landowner pursuant to E)2)b) and all cost estimates have been completed, pay costs associated with the landowner claim (considering C)3) above), including the cost to complete the necessary work.

F) Implement action for Domestic Wells.

- 1) Trigger: When the Model predicts NPI for an operational domestic well.
- 2) KWBA actions will be completed within 60 days (provided that the land/well owner cooperates) from receipt of a claim as follows:
 - a) Field verify (with the affected landowner if requested) static depth to groundwater levels within the well and compare to Model values to determine if flow stoppage is due to groundwater level decline due to KWB operations. If needed:
 - (1) Obtain right-of-entry permit and well data release from well owner.
 - (2) Collect pump manufacture data, the in-situ pump setting and the casing depth information.
 - b) Identify availability of and cost of a permanent connection to the nearest water service provider.
 - c) Identify acceptable mitigation (for example, lower the domestic submersible pump bowl setting sufficient to restore and maintain service or drill and equip a new well that complies with applicable county well standards) to provide the least-cost short- and long-term solution, including an estimate to complete the necessary work.
 - d) Develop and submit a report to the landowner informing the landowner of the findings and proposed actions, including denying the claim because groundwater declines are not due to KWB operations.
 - e) If necessary for emergency health and safety concerns, provide interim in-home water supplies within 14 days after receipt of the claim until a permanent mitigation action is implemented or the claim has been denied because groundwater declines are not due to KWB operations.
- 3) At KWBA's option, it may reduce or adjust pumping of its wells as necessary to prevent, avoid, or eliminate the NPI using the Model to identify the well or wells that may require reduction or adjustment in pumping.
- 4) If groundwater declines are due to KWB operations, unless KWBA implements F)3), once an agreement is reached for KWBA to provide mitigation pursuant to F)2)c) above and all cost estimates have been completed, pay costs associated with the landowner claim (considering C)3) above), including the cost to complete the necessary work.

G) Action for Other Landowner Claims.

- 1) Trigger: A landowner makes a claim of impact on his groundwater use (which could be due to KWBA's operations, adjacent landowners, or a combination) that does not relate to the actual (or likely) cessation of production at a well.
- 2) Actions:
 - a) Refer claim to the Board of Directors to evaluate and respond to landowner claim at its next regularly scheduled meeting.
 - b) Process claim according to agreed upon dispute resolution process (e.g., mediation, arbitration, etc.) in the event the affected landowner does not agree with the Board of Directors' response.

Development of Joint Operating Plan

The Triggers and Actions described above apply to the operations of the Kern Water Bank. In the evaluation of KWB operations, the Model compares groundwater conditions with the operation of the KWB (the "With KWB Operations" condition) against groundwater conditions without the operation of the KWB (the "Without KWB Operations" condition). In the "Without KWB Operations" condition, the Model assumes the continued operation of other groundwater banks in the area of the project. This KWB Long-Term Operations Plan is modeled after and is substantially similar to Rosedale's "Long-Term Project Recovery Operations Plan Regarding Rosedale-Rio Bravo Water Storage District Projects," (Rosedale Operations Plan) included as a part of Rosedale's April 2015 Stockdale Integrated Banking Project Draft Environmental Impact Report (SCH#: 2013091076). The implementation of the Long-Term Operations Plan and the Rosedale Operations Plan address the cumulative impacts on groundwater of both projects. KWBA and Rosedale are coordinating to develop a joint operations plan applicable to the combined groundwater impacts of the KWB and Rosedale operations. Under a joint plan, the modeling of the "Without KWB Operations" condition will assume that neither the KWB nor the Rosedale banks will be in operation. As a result, the joint plan may include triggers applicable to the joint operations that may be applied in lieu of the Triggers described in this KWB Long-Term Operations Plan and the Rosedale Operations Plan.

Release; KWBA's Rights Against Others

In all instances when KWBA takes action to mitigate the effects of declining groundwater levels under this Plan, the affected landowner shall be required to execute an appropriate release in favor of KWBA. Nothing in this Plan or any action taken by KWBA hereunder shall affect KWBA's rights or remedies against any other person or entity (e.g., adjacent landowners, other recovery projects in the area and participants in such projects, etc.) which may have caused or contributed to the effects for which KWBA has mitigated; if appropriate, an affected landowner that receives assistance from KWBA hereunder shall assign its rights against such other person(s) or entity(ies) to KWBA.