

APPENDIX 7-2A. KNOWN AREAS OF CONTROVERSY

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1.1 DWR KWB MODEL DEVELOPMENT

The DWR KWB Model is based on the U.S. Geological Survey's MODFLOW platform and was calibrated for the historical period from 1988 through 2014. It was developed by the California Department of Water Resources (Department or DWR) with assistance from its consultant, RMC Water and Environment, and in collaboration with both Kern Water Bank Authority (KWBA) and Rosedale-Rio Bravo Water Storage District (Rosedale). The DWR KWB Model was developed for specific use in the technical analyses for this Revised Environmental Impact Report (REIR) (see Section 7.1, Surface Water and Groundwater Hydrology, and Appendix 7-2).

KWBA and Rosedale were generally in agreement with the technical aspects of the DWR KWB Model with one exception. As evidenced by its two e-mails presented below, Rosedale does not agree with how the Department modeled "Without KWB Operations."

1.1.1 Rosedale Position on "Without KWB Operations"

The Department received a November 12, 2015 e-mail that stated:

"The APO assumed a "no project" condition whereby all recharge water delivered to the Kern Water Bank was eliminated from the system. I believe this creates a comparative condition that overstates the benefits of the KWBA project and minimizes pumping impacts. It also does not reflect the reality that other nearby projects would have recharged that water in the absence of the KWBA project. For example, prior to the development of the KWB, a greater percentage of Kern River and high-flow SWP water was delivered into the Kern River fan area (including Rosedale). This is demonstrated by the Kern County Water Agency (KCWA) analysis used in the Monterey Plus EIR, which concluded that in the absence of the KWB all SWP water could have otherwise been delivered into other Kern Fan Banking Projects. This is an important issue as in a no KWB situation Rosedale would likely have significantly greater access to certain Kern River and SWP supplies. See attached document supporting the capacity of the Kern Fan to absorb water diverted to the KWB in a "no project" scenario."

The Department also received a March 22, 2016 email that stated:

"I would like to thank you and the DWR team for providing me updates and including me in discussions regarding various aspects and assumptions of the groundwater modeling efforts in support of the Environmental Impact Report for the Kern Water Bank Project. I sincerely hope our discussions have been beneficial to the preparation of the document. As I have mentioned on each occasion/meeting, I remain concerned that the no project alternative does not take into account the water that would have been delivered into the Kern Fan area absent the Kern Water Bank project. Because the Kern Water Bank has resulted in a reallocation of water supplies (and modified the recharge location of those supplies) the failure to analyze this condition would appear to skew the results in a no-project baseline condition and cause the levels of impact created by the Kern Water Bank (KWB) to be understated. Simply put, the elimination of over 1 million acre-feet from the groundwater basin is not a reasonable assumption in the modeling of the Kern Water Bank no project condition, as it has been demonstrated that the water would

have been recharged into the Kern Fan area, resulting in higher groundwater levels in the absence of the KWB project than those that are being proposed for consideration.

While I do not fully appreciate the reasoning behind the decision to not include this analysis, it was conveyed to me in this latest meeting that the KWB analysis was only to consider “future operations and maintenance of the Kern Water Bank”. I believe this to be inconsistent with the following:

1. The March 5, 2014 court decision states DWR was obligated to prepare a new EIR analyzing the *“transfer, development and operation of the Kern Water Bank”*. (p.13).
2. The Court reiterated this requirement in the Joint Ruling on submitted matter (dated October 2, 2014) where it stated, “DWR’s environmental review should include the transfer, development, and operation of the Kern Water Bank.” (p.7).
3. The Writ specifies that DWR must prepare a revised EIR to correct the CEQA error *“with respect to the analysis of the potential impacts associated with the transfer, development, use and operation of the Kern Water Bank as a water banking and recovery project”*. (Writ, par.3)
4. The Writ also specifically stated that DWR is to correct the deficiencies identified in the March 5 and October 2, 2014 rulings. The court’s language mandates a much broader analysis than what was represented in our discussion and the fact that the “transfer and development” of the KWB was explicitly included in the language would indicate that an accurate assessment of no-project conditions must be part of the analysis.

Finally, it was never envisioned that the KWB project would reduce the normal, natural and unavoidable recharge to the basin, which is precisely what the proposed analysis would reflect. Contractual commitments were made to ensure that this did not happen. The analysis presented is in conflict with that stipulation and should be corrected accordingly. As I mentioned in our discussion, I have asked our groundwater modeler to run an analysis which takes into account the recharge of the water, delivered to the KWB for the period 1995-2014, into the no project baseline. This water will be recharged in the Kern Fan area using the Kern County Water Agency analysis for the State Water Project water supplies and some basic assumptions for Kern River and Friant Kern water supplies. The modeler is preparing the input files for this analysis and will hopefully have the results in the next month.

Notwithstanding the concerns identified above, I appreciate the complexity and difficulty of undertaking the analysis that was directed by the Court and applaud the amount of work you have done in the short time available.”

1.1.2 Department Response to Rosedale Position on “Without KWB Operations”

The Department and Rosedale met four times in 2015 (May 29, September 17, November 6, and November 19) and once in 2016 (March 17, 2016) to discuss KWB modeling assumptions and results for past and future conditions. Many of Rosedale’s suggestions were included in the Department’s groundwater modeling and analysis for the REIR, and there is general agreement on all assumptions used for groundwater modeling except for Rosedale’s position with regard to the Department’s approach in modeling the “Without KWB Operations” scenario. At the November 19, 2015 meeting, Rosedale’s issue was discussed as set forth in its November 12 email (presented above). Modeling assumptions were further discussed at a meeting on March 17, 2016, which was followed by a March 22, 2016 e-mail (presented above) from Eric Averett to the Department.

After careful consideration of Rosedale's position, the Department has concluded that it would be inappropriate to revise its "Without KWB Operations" scenario in the REIR based on Rosedale's position for the following reasons discussed below:

1. Rosedale states that it remains "concerned that the no project alternative does not take into account the water that would have been delivered into the Kern Fan area absent the Kern Water Bank." Rosedale further asserts that "because the Kern Water Bank has resulted in a reallocation of water supplies (and modified the recharge location of those supplies), the failure to analyze this condition in the REIR would appear to skew the results in a no-project baseline condition and cause the levels of KWB impacts to be understated". This position appears to suggest that the REIR must consider where the water that went historically into the KWB would have gone if the KWB had not been developed. If this is correct, the question of what would have happened to the KWB recharge water relates to the question of what is the "no project" alternative.

The Department considered five alternatives, including four variations of the no project alternative, in the Monterey Plus EIR. The no project alternative in the Monterey Plus EIR was a locally operated State Water Project (SWP) bank, which would have had operations similar to the recharge and recovery operations of the KWB (see Monterey Plus DEIR, Chapter 11). Alternatives to the Monterey Amendment, including different places of use, could have been raised during the Monterey Plus EIR review process, and then during the subsequent litigation, but were not. The time for the Department to consider a different no project alternative, and the time for a challenge to the no project alternatives the Department did consider, has now passed. The Court found the Monterey Plus EIR alternatives to be adequate, including the no project alternatives. Therefore, the REIR does not need to evaluate yet another no project alternative, or any other project alternative to developing the KWB.

2. Rosedale appears to argue that the language in the court order which includes the word "transfer" requires the Department to determine what would have happened to KWB water without the KWB, and that this should serve as the baseline for evaluating KWB impacts.

The Department's review has focused on the development and continued use and operation of the KWB as a locally owned and operated groundwater banking and recovery project ("KWB activities"). This was the heart of the claim in the *Rosedale v. DWR* lawsuit which led to the court's decision that the Monterey Plus EIR did not adequately analyze the "future impacts" of the KWB. In a proposed order submitted to the court by Rosedale, KWBA, and the Department, Rosedale supported an analysis of the KWB that did not include the transfer of the KWB. The court included the "transfer" of the KWB in the final order based on arguments of the *CDWA v DWR* plaintiffs that the Department's analysis might find some new information that might affect the analysis of the impacts of the transfer. The Department does not think that this means that the Department should re-examine issues relating to what would have occurred in a no project analysis without a KWB (whether operated for the benefit of the SWP or for local benefits). The California Environmental Quality Act (CEQA) requires that the significance of the impacts of a proposed project be evaluated relative to existing conditions. Therefore, the REIR evaluates the impacts of the KWB relative to existing conditions in 1995 and 2014, and not to hypothetical or speculative conditions that might have occurred in the absence of a KWB as proposed by Rosedale.

This REIR supplements but does not supersede the analysis of the Monterey Plus EIR. The Monterey Plus EIR focused on the transfer of the Kern Fan Element (KFE) property. This REIR did not identify any new impacts or changes to impacts caused by the analysis of the transfer of the KFE property; therefore, the Monterey Plus EIR fully disclosed all impacts caused by the transfer of

the KFE property. The REIR therefore properly focuses on the KWB's development and continued use and operation.

3. Rosedale states that the Kern County Water Agency (KCWA) analysis prepared for the Monterey Plus EIR (DEIR Appendix E, pages 39-43) "concluded that that in the absence of the KWB, all SWP water could have otherwise been delivered into other Kern Fan Banking Projects. This is an important issue as in a no KWB situation. Rosedale would likely have significantly greater access to certain Kern River and SWP supplies."

The KCWA analysis does not support the Rosedale position. The reason for the KCWA analysis was, because as noted in Monterey Plus DEIR Section 6.4.1, KWB Lands could represent new south-of-Delta storage for KCWA that would not be available under the Monterey Plus baseline scenario and thus could potentially increase SWP deliveries and Delta diversions. In trying to determine what deliveries KCWA could have taken absent KWB Lands, the Department asked KCWA to review the deliveries of SWP water to KWB Lands and determine how much of that water could have been stored in other storage programs that KCWA could access and that were existing at that time. The existing storage programs KCWA considered were limited to projects in the Kern Fan area, which included: the Berrenda Mesa Project; City of Bakersfield 2800 Acres Project; and the Pioneer Project, including the Kern River Channel. KCWA conducted a detailed monthly analysis of these storage programs, reviewing historical deliveries to those programs, estimating the remaining recharge capacity that would have been available for additional deliveries, and comparing SWP deliveries to KWB Lands to this remaining available recharge capacity. Since evaluation of the project's potential Delta impacts was the sole purpose of the KCWA analysis, the KCWA analysis only looked at whether it was hypothetically possible to store water in storage programs existing in 1995. It did not project where such water might, in reality, actually have been delivered or stored. Nor did it consider Kern River or Central Valley Project (CVP) water deliveries to the KWB or the recovery of any water stored.

4. Rosedale states that, during the period 1995-2014, "the elimination of over 1 million acre-feet from the groundwater basin is not a reasonable assumption in the modeling of the Kern Water Bank no project condition, as it has been demonstrated that the water would have been recharged into the Kern Fan area, resulting in higher groundwater levels in the absence of the KWB project than those that are being proposed for consideration." Rosedale's position appears to be that this should be the baseline for evaluating impacts from the KWB.

Setting aside the question of what kind of water (SWP, CVP surplus water, or Kern River flood water) or how much water is at issue here, it is not reasonable to assume that in the absence of the KWB, other parties would have banked the KWB recharge water without recovery. It is much more likely that recharge and recovery would have been similar to past and projected future KWB operations. KWBA participants likely would have found other places to store the water or could have developed exchanges or other water transactions outside of Kern County (e.g., Semitropic Water Bank; Southern California municipalities for future return). Even if other water districts would have received and banked the KWB water, it is very reasonable to assume that they would do so with the expectation of withdrawing all or a major amount of the water from storage. Thus the impacts would have been similar to KWB impacts but possibly occurring elsewhere in the groundwater basin.

5. Rosedale states that "it was never envisioned that the KWB project would reduce the normal, natural and unavoidable recharge to the basin, which is precisely what the proposed analysis would reflect. Contractual commitments were made to ensure that this did not happen. The analysis presented is in conflict with that stipulation and should be corrected accordingly."

It appears that Rosedale is referring to the 1995 Memorandum of Understanding (MOU) (REIR Appendix 5a) among KWBA and other nearby water banks. The exact language of the MOU is found on page 6:

“Operators of the projects within the Kern Fan Area will avoid operating recharge projects in a fashion so as to significantly diminish the natural, normal and unavoidable recharge of water native to the Kern Fan Area as it existed in a pre-project condition. If and the extent that this occurs as determined by the Monitoring Committee, the parties will cooperate to provide equivalent recharge capacity to offset such impact.”

Two of the three sources of KWB recharge water are the SWP and CVP and, therefore, cannot be characterized as “water native to the Kern Fan Area as it existed in a pre-project condition.” In fact, approximately 75% of all KWB banked water comes from the SWP and CVP. The determination of the amount of Kern River water supply available, whether banked in the KWB or other Kern Fan groundwater banks, would be subject to many factors, including but not limited to, upstream Lake Isabella operations, hydrology, soil saturation, and water rights.

1.2 CONCLUSION

While it is possible to generate a hypothetical analysis of the distribution of water to identify uses of KWB water before and after the development of the KWB, the Department determined that (specifically for the post-transfer KWB) this would not be useful in trying to identify, and would, in fact, obscure the impacts of the operation of the bank itself. The Department has determined that the appropriate starting point for the “Without KWB Operations” scenario is to (1) remove KWB recharge and recovery operations from the model, (2) assume no groundwater recovery occurred in KWB Lands, and (3) remove historical recharge of Kern River floodwaters on KWB Lands. This allows the modeling analysis to isolate and fully quantify the effects of KWB operations not only in the past, but particularly in the future, as ordered by the Court. Identifying and evaluating environmental impacts from the development and continued use and operations of the KWB – and not evaluating other alternative projects and actions taken by others under a “Without KWB Operations” scenario – is consistent with the Court’s direction to the Department.

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