

**STATE OF KANSAS  
BEFORE THE DIVISION OF WATER RESOURCES  
KANSAS DEPARTMENT OF AGRICULTURE**

**In the Matter of the City of Wichita’s )  
Phase II Aquifer Storage and Recovery Project ) Case No. 18 WATER 14014  
In Harvey and Sedgwick Counties, Kansas. )  
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Pursuant to K.S.A. 82a-1901 and K.A.R. 5-14-3a.

**COMMENTS OF DWR REGARDING RECOMMENDED ORDER**

COMES NOW, the Kansas Department of Agriculture, Division of Water Resources (“DWR”), by and through counsel, Stephanie A. Kramer, and, in accordance with K.A.R. 5-14-3a, submits the following comments regarding the Recommendations Regarding the City of Wichita’s Proposed Modification of the Aquifer Storage and Recovery Project Phase II Water Appropriation Permits (“Recommended Order”) issued in the above-captioned matter.

**I. BACKGROUND AND RECOMMENDED ORDER**

On January 14, 2022, Presiding Officer Constance C. Owen issued the Recommended Order for the Chief Engineer to consider in determining whether proposed modifications to water appropriation permits held by the City of Wichita, Kansas (“City”) for the operation of its Aquifer Storage and Recovery Project (“Project”) should be approved. Broadly, the Project utilizes infrastructure that currently allows the City to divert surface water from the Little Arkansas River during times of high flows, treat that water to drinking water standards, and either use it directly to meet municipal demand or inject it into the Project’s Basin Storage Area (“BSA”) within the Equus Beds Aquifer (“Aquifer”).

Currently, when the City injects treated Little Arkansas River surface water into the BSA, it earns corresponding “recharge credits” that allow it to later pump an equivalent amount of

water from the BSA using its Project recharge and recovery wells. The volume of water that the City is entitled to withdraw from the BSA based on its accumulation of recharge credits is determined using an accounting method that calculates the volume of water that is lost to the Aquifer or migrates within the Aquifer over time. The Project's governing findings and orders divide the BSA into "index cells," and the City currently is not permitted to withdraw water from any index cell based on accumulated recharge credits when the water level in that index cell falls below the level that it was at in January 1993 (when the BSA was approximately 92 percent full and the Aquifer was approximately 88 percent full within the Equus Beds Wellfield). This water level is referred to as the "minimum index level" for each index cell.

The Aquifer is currently functionally full, and injection of Little Arkansas River surface water is thus practically impossible, unless the City first withdraws water from the BSA in order to make room for new injected water. Additionally, the current minimum index levels mean that a prolonged drought, which would likely cause the Aquifer's water table to drop below the current minimum index levels, could incentivize the City to withdraw its accumulated credits (possibly unnecessarily) at the beginning of a drought or could result in accumulated recharge credits being stranded during the very time the City would need them the most, despite the Aquifer potentially remaining substantially full. To attempt to remedy those issues, the City developed its Aquifer Storage and Recovery Permit Modification Proposal ("Proposal"), which was submitted to DWR for consideration in March 2018.

The Proposal seeks to modify the City's existing Project permit conditions in two ways. First, the City proposes that the Project's existing minimum index levels be lowered, such that the City will be allowed to withdraw recharge credits as long as the Aquifer is approximately 80 percent full on average. Second, the City proposes that it be permitted to send treated surface

water diverted from the Little Arkansas River that cannot be physically injected into the Aquifer due to a high water table directly to the City’s main water treatment plant for municipal use and subsequently be permitted to withdraw water from the BSA based on the accumulation of “Aquifer Maintenance Credits” (“AMCs”), which the City would be credited for based on the volume of water that remains in the BSA as the result of the City using Little Arkansas River surface water instead of BSA water to meet municipal demand.<sup>1</sup> AMCs would be tracked separately from physical recharge credits through a new accounting methodology that the City has proposed to track the accumulation and migration of AMCs within each index cell. The two aspects of the Proposal are separate and independent from one another—either aspect of the Proposal could be approved and the other denied, both aspects could be approved, or both aspects could be denied.

The Recommended Order was issued following a formal phase public hearing where testimony and evidence was presented by the four parties to the proceedings: the City, Equus Beds Groundwater Management District No. 2 (“the District”), DWR, and a group of intervenor area water right owners (“the Intervenors”). Comments from members of the public were also accepted during the formal phase public hearing. The City has advocated for its Proposal to be approved, while the District and the Intervenors contend that the Proposal should be rejected on numerous grounds. DWR determined following an initial review of the Proposal, and still believes, that the Proposal is reasonable and in the public interest and should be approved subject to certain permit conditions that would ensure protections for existing area water right owners.

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<sup>1</sup>The City submitted seven proposed permit conditions in conjunction with the Proposal, one of which was the proposed condition that the City will only be permitted to accumulate AMCs when the Aquifer is too full to allow for physical injection. City’s Exhibit 1, Proposal, p. 3-6. The Recommended Order erroneously states that the Proposal does not contain any such proposed condition. Recommended Order, p. 162.

More detailed information regarding the Project, the Proposal, the procedural history of this matter, and the various arguments of the Parties is set forth in DWR's Post-Hearing Brief.

The Presiding Officer has recommended that the Chief Engineer dismiss the Proposal "on the grounds that the Kansas Water Appropriation Act, K.S.A. 82a-701, et seq., does not allow the proposed fundamental changes to the City's water appropriation permits to be requested absent the filing of new applications pursuant to K.S.A. 82a-711" and alternatively "on the grounds that the City has not met its burden to demonstrate, by a preponderance of the evidence, that the requested changes will not impair existing water rights or prejudicially and unreasonably affect the public interest, pursuant to K.S.A. 82a-708b, K.S.A. 82a-711, and all other applicable statutes and regulations."

## **II. DWR'S COMMENTS**

### **A. General Comments**

While DWR does agree with several of the Presiding Officer's findings, it disagrees with some of the most important conclusions contained in the Recommended Order, including the ultimate recommendation that the Proposal should be dismissed in its entirety. Generally, it is DWR's opinion that the Recommended Order fails to acknowledge some of the most important arguments raised by both the City and DWR and has disregarded witness testimony that supports those arguments. The Recommended Order also misconstrues some of DWR's previously-raised arguments. Further, DWR believes that the Presiding Officer has given more credence than was warranted to many of the District's arguments, given that DWR and the City both provided numerous examples of the District either badly misconstruing hearing testimony or relying on

arguments or hypothetical scenarios so off-base that they demonstrate a concerning lack of understanding of the Project and the Proposal, as well as relevant legal authority.<sup>2</sup>

DWR disagrees with the Recommended Order's findings that the Proposal should be denied because of the City's failure to file an application for a new appropriation and because the City failed to adequately show that the Proposal would not impair existing rights or prejudicially and unreasonably affect the public interest. DWR believes that the record in this matter supports alternative findings as to those issues. It continues to be DWR's opinion that the Proposal is reasonable and lawful and should be approved subject to certain permit conditions that would ensure the rights of existing area water right owners are safeguarded. DWR feels that it did its due diligence in reviewing the Proposal initially and feels that such is not reflected in the

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<sup>2</sup>The District has claimed that it has the authority to monitor the Project by determining how recharge credits can be accumulated and when they can be withdrawn. It does not. Those determinations are very clearly within the purview of the Chief Engineer. *See* DWR Post-Hearing Brief, pp. 20-21. The District has also made repeated references to the District's power to grant waivers of DWR's well spacing regulations, despite both the face of the relevant regulation and the hearing record very clearly establishing that that power is vested in the Chief Engineer. *See id.* at 10; K.A.R. 5-10-4. Additionally, the District has raised the completely unfounded argument that the "lightning speed" of these proceedings has violated its Procedural Due Process rights. This argument was raised in spite of the fact that these proceedings would not have been concluded until more than two years after the City submitted its proposal even if the proceedings had not been delayed by the Covid-19 pandemic, the District was granted extensions of numerous deadlines, and all the parties to these proceedings have always had the right to an ultimate appeal pursuant to the Kansas Judicial Review Act. Perhaps most outlandishly, the District has argued that the Kansas Administrative Procedure Act ("KAPA") requires the District to have been the first entity to review the Proposal. *See* District's Proposed Findings, Conclusions, and Brief, p. 86. That argument is patently preposterous, as neither the District nor the City are even administrative branch agencies subject to KAPA, and no agency action that would be properly subject to review pursuant to KAPA has yet taken place here. Furthermore, the District raised arguments and cited examples that illustrate a fundamental misunderstanding of the Proposal, including arguing that approval of the Proposal would result in unfair treatment of other area water users who do not possess anything resembling an aquifer storage and recovery project as compared to the City and relying heavily on a hypothetical that did not reflect that, under current Project operations, the City has to withdraw water from the Aquifer to make space for injection. *See* DWR Reply Brief, pp. 7-9 and 31-32. Finally, the District persistently misconstrued the hearing record throughout its Post-Hearing Brief. In numerous places in its Post-Hearing Brief, the District placed quotation marks around the District's counsel's verbal questions in an attempt to imply that those quoted questions were actually Mr. Letourneau's testimony. *See* District's Proposed Findings, Conclusions, and Brief, pp. 3-6. Finally, the District set forth patently inaccurate recitations of Mr. Letourneau's and other witnesses' testimony in numerous places. *See* DWR Reply Brief, pp. 34-35; 38-39.

Recommended Order. The following sections will set forth DWR's comments as to the Recommended Order's specific findings in more detail.

B. The Proposal Does Not Constitute a New Appropriation

The Presiding Officer found that the Proposal should be dismissed because the City's water use under the Proposal would constitute a new appropriation of water. The Presiding Officer concluded that the City therefore should have filed new applications pursuant to K.S.A. 82a-709, to be considered pursuant to the criteria set out in K.S.A. 82a-711.<sup>3</sup> The basis for this conclusion is the Presiding Officer's finding that both lower minimum index levels and the approval of AMCs would allow the City to use more groundwater than it is currently authorized to and would change the source of supply of the City's Project water rights.<sup>4</sup>

As to the issue of whether approval of the Proposal would allow the City to use more water than it is currently entitled to, the Recommended Order states, "As the record demonstrates, approval of AMCs and/or approval of lower index levels would allow for more groundwater to be withdrawn than currently authorized."<sup>5</sup> That statement is simply inaccurate. Approval of the Proposal would not permit any of the City's Project water rights or permits to exceed their current individual authorized annual quantities or authorized rates of diversion. The City's base water rights in the Equus Beds Wellfield authorize the use of 40,000 acre-feet of water per year, and the water appropriation permits for the City's Project recharge and recovery wells authorize the City to withdraw a total of 19,000 acre-feet of water per year in the form of

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<sup>3</sup>See Recommended Order, p. 4.

<sup>4</sup>*Id.* at 130-131.

<sup>5</sup>*Id.* at 130.

recharge credits. Nothing about the Proposal would change that, as the following testimony from Mr. Letourneau illustrates:

Q: With respect to the annual limit on withdrawal of credits that you've referred to, the 19,000 acre-feet that the City can't exceed in a year, even if it has the credits, does the proposal...suggest any change to that 19,000 acre-foot annual limit?

A. No.

Q. And if the City subsequently wanted to make a change to that 19,000 acre-foot limit, what procedure would the City need to follow to do that?

A. ...it would require a new application and an approval of a permit to proceed.

Q. And so at that point, in order to make that change, the City would have to come back to the DWR, go through the new application process, and consider all of the factors, public interest, non-impairment of other users, that you would consider in any new application process?

A. Absolutely.<sup>6</sup>

On the topic of authorized quantity, the Recommended Order devotes significant discussion to K.A.R. 5-5-3, and the Presiding Officer seems to believe that DWR offered that regulation in support of an argument that K.A.R. 5-5-3 allows the City to increase the authorized annual quantity of its Project water rights without filing a new application.<sup>7</sup> DWR did cite K.A.R. 5-5-3 in its Post-Hearing Brief, but only to counter the District's previously-raised argument that it would be impermissible for the City to increase its consumptive use under its Project permits as a result of the Proposal. K.A.R. 5-5-3 prohibits an increase in consumptive use only for vested or perfected water rights, and that is the only proposition that KDA cited that regulation in support of.<sup>8</sup> The water appropriation permits for the City's Project recharge and recovery wells are neither vested nor perfected water rights, and the City is therefore permitted to

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<sup>6</sup>Tr., p. 1289, l. 24 – p. 1290, l. 21.

<sup>7</sup>Recommended Order, pp. 124-126.

<sup>8</sup>See DWR Post-Hearing Brief, pp. 26-27; K.A.R. 5-5-3.

increase its consumptive use under its recharge and recovery well permits. DWR did not cite K.A.R. 5-5-3 in support of any argument that the City is permitted to increase the annual authorized quantities of its existing Project permits without filing a new application. The City would not be permitted to do that, and it has not sought to.

It actually appears to be the Presiding Officer who has conflated the concepts of consumptive use and authorized quantity, in addition to misconstruing DWR's arguments on those topics. For example, the Recommended Order states, "...the fact that the City is presenting this Proposal for the purpose of increasing their water supply during an extreme drought undermines the claim that the new operations would not threaten to exceed the authorized quantity."<sup>9</sup> DWR does not agree with that assertion. In fact, that the City could ensure the reliability of its water supply during extreme drought by increasing its consumptive use under its unperfected Project permits to a degree that would still be within the authorized quantities for those permits illustrates exactly why the City has need for the Proposal. In any case, the Presiding Officer's findings as to the amount of water the Proposal would entitle the City to are erroneous. The Proposal will not allow the City to increase the authorized annual quantity or the authorized rate of any of its water rights or permits, and such a finding is more than adequately supported by the Proposal itself and the hearing record.

As to the issue of the Proposal changing the source of supply for the City's Project permits, the Recommended Order says that, as to AMCs, "...the source of water for direct municipal use (without storage) is the Little Arkansas River. This source is clearly different than groundwater recharge credits accumulated by injection and storage of actual water in the aquifer

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<sup>9</sup>Recommended Order, p. 130.



(water recharged), as is authorized by the permits.”<sup>10</sup> The Recommended Order accurately states that the source of diverted Project surface water that is used directly for municipal use rather than being stored is the Little Arkansas River and the source for recovered recharge credits is the BSA within the Aquifer. However, the above-quoted statement conflates the idea of changing source of supply with the simple fact that the City has been authorized to utilize two different sources of water for the Project since its inception.

The City is already permitted to appropriate a certain authorized quantity from the Little Arkansas River under the Project’s surface water intake permit and another authorized quantity from the BSA under its Project recharge and recovery permits. None of those authorized quantities or their respective sources would change under the Proposal. As such, the facts set forth in the quoted statement from the Recommended Order do not reflect any change in source of supply (and they are not unique to the concept of AMCs). Rather, they simply reflect how the Project has operated since its inception and will continue to operate regardless of whether the Proposal is approved. The fact that the City utilizes two different sources of water for different aspects of the Project is the most fundamental aspect of the entire concept of the Project. It is not indicative of any defect in the Proposal. The approval of AMCs would not change the source of supply for any of the City’s Project water rights.

The Presiding Officer also found that lowering the minimum index levels would change the source of supply for the Project’s recharge and recovery wells.<sup>11</sup> The Recommended Order states:

The current permit conditions (and associated regulations) define the basin storage area by its lower and upper levels. According to the record, water existing below the bottom of the lower index levels is Equus Beds water, existing outside the basin

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<sup>10</sup>*Id. at.* 131.

<sup>11</sup>*Id.*

storage area. As such, it is part of the water supply upon which the other water right holders in this over-appropriated area depend. If the City is allowed to...expand its basin storage area), it would be accessing a new source of supply beyond that approved by the permits.<sup>12</sup>

The entirety of the record reflects that lowering the minimum index levels would not, in fact, give the City access to any water that is already dedicated to other users. The City's recharge credit accounting method ensures that water the City pumps as the result of recharge credit accumulation is water that is dedicated to the City and not to other users, regardless of the physical space in the Aquifer that that water comes from, and that will continue to be the case if the Proposal is approved. The following testimony from Mr. Letourneau demonstrates as much:

Q. ...the basin storage area is 120,000 acre-feet, correct?

A. Correct.

Q. And the City has approximately 6,000 acre-feet in recharge credits?

A. I think so.

Q. So what else...is in the basin storage area?

A. Well, okay, whether it's Equus Beds or basin storage area, that's all about accounting, okay, whatever we call it, it's about accounting. So, currently, if the water level is full, **then the Equus Beds water is in that particular space...**so...if somebody is pulling water from that particular space, other than a recharge credit, they're pumping Equus Beds water.

Q. All right. So even though the basin storage area sits below many water right holders in this area, when they use their water appropriation rights, those water users are using Equus Beds water, and the City well...a little ways down...could use either Equus Beds water or basin storage area water?

A. That's correct.<sup>13</sup>

Shortly after this exchange, Mr. Letourneau unequivocally answered “no” when asked whether lowering the minimum index levels alone would convert Equus Beds

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<sup>12</sup>*Id.*

<sup>13</sup>Tr., p. 1824, l. 22 – p. 1825, l. 25.

water into BSA water.<sup>14</sup> Subsequently, during an exchange wherein the District's counsel explicitly acknowledged that the City will remain limited to 19,000 acre-feet of recharge credit withdrawals per year, Mr. Letourneau maintained that, regardless of the size of the BSA, the City's recharge and recovery wells will continue to be permitted to pump only the water the City is entitled to based on recharge credits actually accumulated.<sup>15</sup> He also emphasized that a larger BSA will not enable the City to accumulate any more recharge credits than it is currently able to:

Q. So...up to 120,000 acre-feet of water would be dedicated to the City of Wichita; is that correct?

A. Only if the City actually had a recharge credit. That [120,000 acre-feet] is the space that's there.

Q. To the extent the City has accumulated 120,000 acre-feet of recharge credits, would 120,000 acre-feet of water then be dedicated to the City of Wichita?

A. Yes. And they can do that today with the physical recharge credit capacity that they have.<sup>16</sup>

It is clear from the above testimony that the BSA currently encompasses water that is dedicated to users other than the City and is part of the water supply that other users in this over-appropriated area depend on (the BSA, which is functionally full, holds approximately 120,000 acre-feet of water, but the City has only accumulated 6,000 acre-feet of recharge credits).<sup>17</sup> Even so, when the City's Project recharge and recovery wells pump recharge credit water, they are only allowed (and have only ever been allowed) to pump water from the BSA that the City is

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<sup>14</sup>*Id.* at 1827, ll. 11-21.

<sup>15</sup>*See id.* at 1495, ll. 11-13

<sup>16</sup>; *id.* at 1497, ll. 1-15.

<sup>17</sup>Of course, a portion of the remaining approximately 14,000 acre-feet is dedicated to the City under its base Equus Beds water rights. The point remains the same—the BSA currently contains a significant amount of water that the City is not allowed to pump based on its accumulation of recharge credits.

entitled to based on actual recharge credit accumulation, as determined using the Project's accounting method. Nothing about that would change under the Proposal.

Even with the BSA expanded, the City will only be entitled to the recharge credits that it has accumulated. As discussed above, the City's water use will also continue to be limited by the quantity and rate authorizations of whatever recharge and recovery well is pumping the relevant credits. Because the record establishes that the BSA currently contains water that is dedicated to other users, to conclude that the Proposal creates a new appropriation on the grounds that it would create a BSA that contains water that is dedicated to other users is illogical and is not supported by the record.

The Recommended Order correctly states that nothing authorizes the City to increase the authorized annual quantities of its Project permits, change the source of supply for those permits, or otherwise create a new appropriation without having filed a new application and having that application evaluated pursuant to K.S.A. 82a-711. However, the Proposal does not do either of those things, and that conclusion is supported by the record. The City is not required to have filed an application for a new appropriation or to have made per se showings as to the criteria set out in K.S.A. 82a-711.

#### C. The Proposal Does Not Violate the Prior Appropriation Doctrine

The Presiding Officer found that the Proposal would violate the doctrine of prior appropriation, based largely on the previously-discussed finding that the Proposal would constitute a new appropriation.<sup>18</sup> As discussed, that finding is incorrect. As such, the only way that the prior appropriation doctrine can truly be violated in this context is if the City's water use

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<sup>18</sup>Recommended Order, p. 134-135.

under the Proposal causes an impairment and DWR subsequently administers the impairing right(s) in a way that does not align with the prior appropriation doctrine. As will be discussed further herein and was discussed in DWR's Post-Hearing Brief, DWR continues to believe it is unlikely that the Proposal will result in the impairment of any existing area water rights or permits. In the event impairment does occur, DWR will administer the impairing water rights pursuant to its established procedures (including in accordance with the doctrine of prior appropriation).

D. Lower Minimum Index Levels Would Not Violate the Phase II MOU

The Presiding Officer found that lowering the minimum index levels as proposed would violate the Memorandum of Understanding entered into by the City and GMD2 prior to the approval of the Phase II permits ("Phase II MOU").<sup>19</sup> However, the City never actually agreed in any binding terms in the Phase II MOU that it would not operate its Project recharge and recovery wells if the Aquifer's water table fell below the current minimum index levels. Rather, the City was ordered not to do so pursuant to the very Phase II permit conditions it is now asking to have modified. The "Commitment" clause of the relevant paragraph of the Phase II MOU reads as follows:

Because the Project recharge and recovery wells can only be pumped if water levels in the aquifer are higher than the historic low level, no impairment is expected. Nonetheless, if a domestic well, existing before the approval of this MOU and within 660 feet of an existing or new Project well, is adversely impacted by drawdown from such well, the City will re-drill or take other appropriate, affirmative action to restore productivity of such domestic well to the same rate and quantity as existed before.<sup>20</sup>

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<sup>19</sup>*Id.* at 140-142.

<sup>20</sup>Phase II MOU, p. 3, para. 6.

The statement in this paragraph, “because the Project recharge and recovery wells can only be pumped if water levels in the aquifer are higher than the historic low level...” does not reflect any commitment on the part of the City (or the District). It is merely a reference to the Phase II permit conditions that established the current minimum index levels. The sentence in question could be removed from the Phase II MOU (or could have never been included in it in the first place) and the actual obligations of the City to make whole any existing domestic water right owner whose impacted well located within 660 feet of a Project well would not change. Illustrative of this is the fact that the relevant sentence of the Phase II MOU begins with the word “nonetheless,” an indication that the sentence that follows is binding on the City regardless of the preceding sentence.

Accordingly, in recommending waivers of well spacing regulations to the Chief Engineer and in entering into consent agreements with the City, the District and area water right owners did not rely on any commitment from the City that the minimum index levels would never change. Rather, they relied on the City’s commitment to make whole any existing domestic water right owner within 660 feet of a Project well who was impacted by the City’s water use under the Project. The City’s obligation in that regard has not changed and, absent some other cancellation of the Phase II MOU, will not change, regardless of the water level that is determined to be the Project’s minimum index level. The record reflects that the City has expressed its continued willingness to abide by that obligation, and permit conditions to that same effect can be included in any order ultimately approving the Proposal.<sup>21</sup>

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<sup>21</sup>See DWR Post-Hearing Brief, pp. 68, *citing* Tr., p. 627, ll. 1-2.

Further, the provision set forth in paragraph B(1) of the Phase II MOU, which the Recommended Order cites, applies to “any water permit applications filed by the City.”<sup>22</sup> As discussed, new applications are neither present nor required here. Moreover, the Recommended Order glosses over the fact that, even if the Phase II MOU provisions related to new applications did apply, a recommendation from the District is not required for DWR to grant a waiver of the relevant well spacing regulation. While a waiver recommendation from the groundwater management district where the wells at issue are located would be customary, the Chief Engineer is authorized to unilaterally waive that regulation if he finds that doing so will not impair an existing water right and will not prejudicially or unreasonably affect the public interest.<sup>23</sup> Particularly with the discussed protections for existing domestic well owners in place, DWR believes granting such waivers would not result in impairment and would be in the public interest. Finally, paragraph B(2) of the Phase II MOU is noteworthy. That provision states:

The commitments made by the City and GMD2 as set forth in this Memorandum of Understanding are subject to the requirements of state law and regulations and the orders of DWR. In the event that any commitment is in conflict with such law, regulation, or order, the law regulation, or order controls. In such event, the City and GMD2 agree to enter into good faith discussions to seek amendment of the commitments consistent with the law, regulation, or order.<sup>24</sup>

Accordingly, the Phase II MOU cannot prevent an otherwise lawful modification to the Phase II permit conditions. As discussed herein, lowering the current minimum index levels does not contravene any applicable law. Therefore, an order of the Chief Engineer approving that aspect of the Proposal, by the express terms of the Phase II MOU, cannot violate the Phase II MOU. The proposal to lower the minimum index levels does not violate the terms of the Phase II MOU, and, even if it did contradict the current

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<sup>22</sup>Phase II MOU, p. 4, para. B(1).

<sup>23</sup>K.A.R. 5-10-4.

<sup>24</sup>Phase II MOU, p. 4, para. B(2).

terms, the fact that the Proposal is otherwise lawful means that it should not be denied because of the existence of the Phase II MOU.

E. AMCs Are Not Passive Recharge

The Presiding Officer found that the AMC aspect of the Proposal should be denied because the accumulation of AMCs would amount to crediting the City for “passive recharge” of the Aquifer, which former Chief Engineer David Pope found was prohibited when he issued the Findings and Order approving Phase I of the Project. All of the parties agree that passive recharge is and should remain prohibited, but they disagree as to whether Chief Engineer Pope created a binding legal definition of “passive recharge” and as to whether AMCs as proposed here would constitute passive recharge.

In his discussion of passive recharge in the Phase I Findings and Order, Chief Engineer Pope wrote that the Phase I hearing would answer the question, “Will the City be considered to be recharging water into the Equus Beds by the concept of ‘passive recharge?’ – i.e., water which the City could have legally pumped, but did not pump.”<sup>25</sup> He also referred to “...the City’s request for passive recharge credits (credits for not pumping City wells in the basin storage area)...”<sup>26</sup> The Recommended Order cites that quoted language in several places and seems to take the position that such language does constitute a definition of passive recharge that is binding as to the present Proposal.

However, it remains DWR’s position that Chief Engineer Pope did not create a binding definition of “passive recharge” in the Phase I Findings and Orders. Chief Engineer Pope’s two explanations of his view of the term “passive recharge” in the context of the proposal that was

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<sup>25</sup>Phase I Findings and Order, p. 2, para. 10.

<sup>26</sup>*Id.* at 9, para. 42.



before him at the time Phase I was approved were in an “i.e.” clause and in a parenthetical clause. Such usage of the term does not constitute a binding definition that the parties are beholden to in the context of this very different Proposal. Relatedly, the Project and the state of the Aquifer has evolved immensely since Chief Engineer Pope initially approved Phase I, and there was no way to have predicted when Phase I was approved that the Aquifer would rebound to its current functionally full level.<sup>27</sup> This is further justification for taking a different view of passive recharge than the one Chief Engineer Pope took at the time Phase I was approved.

DWR and the City have both argued that AMCs as proposed would not amount to passive recharge because they would be accumulated as the result of Little Arkansas River surface water being diverted and passed through the City’s Project diversion works.<sup>28</sup> In support of that position, both parties have cited the fact that Little Arkansas River surface water used directly for municipal use would pass through the Project’s diversion and treatment infrastructure in order to generate AMCs. They have also cited the City’s proposed permit condition that would limit the rate of recharge credit accrual to the actual physical diversion capacity of the Project system, including the quantity and rate limitations of the Project’s surface water intake right.<sup>29</sup>

DWR also believes that AMCs as proposed would comport with the regulatory definitions most applicable to the issue of passive recharge. The definition for “recharge credit” set forth in K.A.R. 5-1-1(mmm) provides that “recharge credit” means “the quantity of water that is stored in the basin storage area and that is available for subsequent appropriation for beneficial use by the operator of the aquifer storage and recovery system.”<sup>30</sup> The definition of “aquifer

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<sup>27</sup>Mr. McCormick testified that, in 2007, Phase II was being contemplated, “honestly, we weren’t expecting the substantial challenges that we have now with the higher water levels.” Tr., p. 1120, ll. 19-21.

<sup>28</sup>DWR Post-Hearing Brief, pp. 59-60.

<sup>29</sup>*Id.*

<sup>30</sup>K.A.R. 5-1-1.

storage” contained in K.A.R. 5-1-1(e) says that that term means, “the act of storing water in an aquifer by artificial recharge for subsequent diversion and beneficial use.”<sup>31</sup> K.A.R. 5-1-1(yyy) provides that “source water” means “water used for artificial recharge that meets the following conditions: (1) Is available for appropriation for beneficial use; (2) is above base-flow stage in the stream; (3) is not needed to satisfy minimum desirable streamflow requirements; and (4) will not degrade the ambient groundwater quality in the basin storage area.”<sup>32</sup>

The Presiding Officer found that AMCs would constitute passive recharge, citing hearing testimony from Chief Engineer Pope and Mr. Boese wherein both of those witnesses opined that AMCs as proposed would constitute passive recharge.<sup>33</sup> Based on this testimony, the Presiding Officer determined that the lack of physical injection of surface water into the Aquifer, rather than the use of Project diversion works or explicit reference to the conditions of Project appropriation permits, is the determining factor as to passivity. The Recommended Order states, “...the term ‘passive’ does not mean that surface water is not diverted or that no infrastructure is involved. Rather, the passivity refers to there being no physical injection of source water into the aquifer, as opposed to actual recharge of the aquifer.”<sup>34</sup> The Recommended Order further says, “...credits based on inactivity (leaving groundwater in the aquifer that could have been pumped) are, by definition, credits for passive behavior.”<sup>35</sup>

The Presiding Officer also determined that the relevant aquifer storage and recovery statutes and regulations and the Project’s governing findings and orders necessarily require “storage” of surface water in the aquifer, citing multiple examples of regulatory provisions and

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<sup>31</sup>*Id.*

<sup>32</sup>*Id.*

<sup>33</sup>Recommended Order, pp. 142-143.

<sup>34</sup>*Id.* at 144.

<sup>35</sup>*Id.*

Project permit conditions that include some form of the word “store.”<sup>36</sup> Specifically, the Recommended Order concludes that the definition of “aquifer storage” “necessarily means water would need to have been physically stored in the aquifer.”<sup>37</sup> It also says that “the requirement of subsequent diversion or appropriation” contained in the definitions for “aquifer storage” and “recharge credit” “necessarily means water would need to have been physically stored in the aquifer.”<sup>38</sup> The Presiding Officer also writes that the requirement that “source water” not degrade the ambient water quality of the basin storage area requires “storage” of surface water in the Aquifer “in order to make sense.”<sup>39</sup> Finally, the Recommended Order states that AMCs as proposed would not result in recharge of the Aquifer and would not result in the net zero impact to the groundwater supply that is the goal of a recharge credit.<sup>40</sup>

DWR agrees with the Recommended Order’s assertion that the aquifer storage and recovery regulations necessarily require that “storage” be part of the Project. It disagrees with the implied resulting assertion that “storage” necessarily requires injection of surface water. Broadly, DWR believes that the Recommended Order places too much emphasis on physical injection of surface water into the Aquifer, as the District and the Intervenors did during the formal phase public hearing. DWR does not believe that physical injection is per se required in order for water to be considered “stored” in the Aquifer and believes that such should not be required when the Aquifer is functionally full and the City would have to draw down the water level to make space for injection. The water that the City would withdraw as a result of the accumulation of AMCS would be physically in state in the Aquifer and, moreover, would be there largely because the

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<sup>36</sup>*Id.* at 144-149.

<sup>37</sup>K.A.R. 5-1-1; Recommended Order, pp. 144-149.

<sup>38</sup>Recommended Order, p. 145.

<sup>39</sup>*Id.*

<sup>40</sup>*Id.* at 148.

City's good management practices over the last three decades have allowed the Aquifer to rebound to its current functionally full state.

Mr. McCormick and Mr. Clement both testified that they do not believe that AMCs as proposed would constitute passive recharge.<sup>41</sup> The Recommended Order states that Mr. McCormick's testimony in this regard, "reflects a misunderstanding of the aspect of passivity in passive recharge credits."<sup>42</sup> However, this statement is not necessarily objectively true—it merely reflects the Presiding Officer's opinion as to passive recharge, and that is an opinion that DWR continues to disagree with. DWR continues to believe that, as Mr. McCormick testified to, the key feature distinguishing AMCs as proposed here from the passive recharge credits the City was seeking when Phase I was proposed is that now, the surface water source that the City proposes to use is the Little Arkansas River, which is connected to the BSA by Project infrastructure.

As discussed above, diverted surface water that the City uses directly for municipal use would pass through the Project diversion works. Additionally, a permit condition tying the accumulation of AMCs to the active diversion capacity of the City's surface water intake right was proposed by the City itself and can be included in any final order approving the Proposal. Further, the Presiding Officer's characterization of AMCs as being credits for the passive behavior of leaving water in the Aquifer could just as easily be characterized as credit for the active behavior of using Little Arkansas River surface water rather than groundwater to meet immediate municipal demand. Another way to think about this concept is that, in order for the City to generate an AMC, it would have to have worked through an active decision-making

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<sup>41</sup>Tr., p. 1122, ll. 8-12.

<sup>42</sup>Recommended Order, p. 144.

matrix that solely involves Phase II infrastructure and Phase II water appropriations. Also noteworthy on the subject of passive recharge is a large portion of the District's cross examination of Mr. McCormick, on pages 1122-1131 of the formal phase public hearing transcript, which illustrates the numerous off-base examples the District employed in attempting to make its case in this regard.

Next, DWR does not believe that that the plain language argument set forth in the Recommended Order supports a finding that one word ("stored") actually means an entirely different word ("injected"). In fact, K.A.R. 5-12-1, which governs aquifer storage and recovery permitting, states, "(a) An operator may store water in an aquifer storage and recovery system under a permit to appropriate water for artificial recharge if the water appropriated is source water."<sup>43</sup> That same regulation further provides, "(b)(1)...The recharge system may include recharge pits, recharge trenches, recharge wells, or other similar systems that cause source water to enter the storage volume of the basin storage area, either by gravity flow or by injection."<sup>44</sup> It is a widely-accepted rule of statutory and regulatory construction that the usage of different words within the same statute or regulation indicates that those words were intended to have different meanings. Here, DWR made the deliberate choice to use "store" in one place in the relevant regulation and "injection" in another place within the same regulation. Therefore, the agency did not intend for those words to have the same meaning. A plain language reading of the relevant regulations supports a finding that "stored" does not necessarily mean "injected" and that the City is therefore not per se required to inject surface water into the Aquifer in order to "store" water in the Aquifer.

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<sup>43</sup>K.A.R. 5-12-1.

<sup>44</sup> *Id.*

DWR also does not believe that the references to “subsequent diversion” and “subsequent appropriation” contained in the definitions for “recharge credit” and “aquifer storage” necessarily require an associated “first” appropriation or diversion or the injection of surface water into the aquifer. For one thing, it is DWR’s opinion that a reading of those definitions in the proper context supports the conclusion that the word “subsequent” is simply intended to require that the stored water be withdrawn from the aquifer later in time than the storage occurred. That reading of the word “subsequent” makes sense because neither of the relevant definitions make any reference to a “first” appropriation or diversion at all—they merely reference storage. Additionally, even if the references to “subsequent appropriation” or “subsequent diversion” in these regulatory definitions are read to impliedly require a “first appropriation,” DWR does not believe it follows that such first appropriation necessarily has to be an injection of surface water into the Aquifer. Under the AMC aspect of the Proposal, the City would use one appropriation of water when it takes Little Arkansas River surface water directly into town for municipal use and would later use a subsequent appropriation when it withdraws AMCs. Therefore, DWR does not believe that the requirement that stored water be available for “subsequent appropriation” or “subsequent diversion” bars AMCs.

Next, the construction that the Presiding Officer has utilized in determining that the requirements for “source water” require “storage” (injection) in order to make sense yields an incongruent reading of DWR’s aquifer storage and recovery regulations as a whole. Applying the same principles of regulatory construction that the Presiding Officer used to reach this conclusion, other elements of the definition of “source water,” namely the requirements that source water be above base-flow stage in the stream not be needed to satisfy minimum desirable

streamflow requirements, would seem to require that all aquifer storage and recovery systems utilize surface water that originated in a stream of some sort.

However, the plain text of other aquifer storage and recovery regulations indicate that that is not what DWR intended. For example, K.A.R. 5-12-1, which governs aquifer storage and recovery permitting, provides, "...The recharge system may include recharge pits, recharge trenches, recharge wells, or other similar systems that cause source water to enter the storage volume of the basin storage area, either by gravity flow or by injection."<sup>45</sup> An aquifer storage and recovery system that utilizes a recharge pit or trench to gravity flow water into a basin storage area was obviously contemplated by DWR, and such a system would not involve a stream at all. The Recommended Order relies on an out-of-context construction of the requirements for source water that does not hold up when the same logic is applied to other aspects of that regulatory definition. DWR does not believe that the requirements for "source water" necessitate the injection of water into the Aquifer. Finally, AMCs will allow recharge of the Aquifer that has previously been achieved to be maintained and will result in a net-zero impact to the groundwater supply, as the City's proposed AMC accounting method will ensure that the City is only entitled to as much water in the form of AMCs as it could have physically injected into the Aquifer if it drew down the water table in order to do so.

Related to the issue of passive recharge, the District has made much of a letter that Chief Engineer Barfield wrote to the City early in his consideration of the Proposal wherein he opined that AMCs were the "functional equivalent" of physical recharge of the Aquifer. Much has been made of the fact that the term "functional equivalent" does not exist in statute or regulation, and

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<sup>45</sup>K.A.R. 5-12-1.

the Recommended Order cites testimony by Mr. Boese that he has never applied the concept of “functional equivalent” because an application “either meets the regulations or it does not.”<sup>46</sup>

DWR believes that inordinate weight has been given to what was, in DWR’s view, Chief Engineer Barfield’s casual use of a phrase that he believed illustrated the situation at hand at the time of his initial review of the Proposal. DWR does not believe that Chief Engineer Barfield intended to say that AMCs could be approved despite not meeting applicable regulations because they were the functional equivalent of physical recharge. Rather, it believes he intended to say that AMCs *actually do* meet the applicable regulations because they are the functional equivalent of physical recharge. The fact that there is no statutory or regulatory definition for “functional equivalent” should not bar AMCs because AMCs nonetheless meet the definition for a “recharge credit,” which is discussed in more detail in the following sections.

In summary as to the question of whether AMCs constitute passive recharge, DWR recognizes that the issue of whether injection of surface water should be per se required in order to generate recharge credits in the context of the Proposal is arguably the aspect of the Proposal that is most open to interpretation and personal opinion. To that end, the point that DWR most wishes to convey is that the Chief Engineer is free to formulate his own opinion as to whether AMCs as proposed here constitute passive recharge. The opinions of two prior chief engineers and of multiple hearing witnesses differ on this point, and the Chief Engineer is not beholden to any of those opinions. It continues to be DWR’s position that AMCs as proposed here would not constitute passive recharge, and DWR believes that such a finding would be reasonable and could be well-supported, for all of the reasons set out in this section.

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<sup>46</sup>Recommended Order, p. 175.



#### F. The City's Modeling Work is Adequate

The Presiding Officer found that the model employed by the City in support of the Proposal was inadequate for several reasons. First, the Recommended Order states that the hearing raised substantial concern as to the suitability of the City's model for evaluating the Proposal's potential impacts on individual existing wells.<sup>47</sup> In this regard, the Recommended Order cites testimony from Dr. Akhbari that, "although the model was a good tool to make decisions on the total volume of water that can be extracted from the basin in a year, the model lacks the capacity for specifying water levels at the location of specific wells" and that the City's model "cannot be used to set groundwater elevations at individual wells."<sup>48</sup> The Recommended Order also says that Mr. McCormick corroborated Dr. Akhbari's testimony, "stating that there are numerous tools that can be used with the USGS model to interpolate specific water levels. However, these techniques were not used."<sup>49</sup>

The Recommended Order's recitation of this testimony leaves out additional testimony that provides important context, some of which directly refutes the testimony set forth in the Recommended Order. First, Mr. Romero, who was also a witness for the District and who has much more real-world modeling experience than Dr. Akhbari, testified that, in his opinion, "it is suitable to use the model to understand drawdown that happens in well areas" and that, in fact, he himself had used the model for this purpose.<sup>50</sup> Mr. Romero testified that he did not recalibrate the model for the type of well-by-well analysis that Dr. Akhbari advocated for before using the model and that he did not think doing so was necessary for the analysis he was performing.<sup>51</sup> Mr.

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<sup>47</sup>*Id.* at 166.

<sup>48</sup>*Id.* at 166-167.

<sup>49</sup>*Id.*

<sup>50</sup>Tr., p. 2583, ll. 17-18; p. 2584, ll. 4-11.

<sup>51</sup>*Id.* at 2587, l. 8 – 2588, l. 1.

Romero further testified that, in general, he believed the City's modeling work in conjunction with determining the new proposed minimum index levels was done reasonably and that the City's modeling work was reasonably valid.<sup>52</sup>

Next, Mr. McCormick actually testified that the type of well-by-well analysis that Dr. Akhbari believed was necessary could result in increasing the model's potential for error. When asked whether he used the model to interpolate specific water levels, Mr. McCormick responded: "We looked at the individual -- the actual locations and pumping values for wells in their actual geographic location. We did not attempt to evaluate individual drawdown impacts on surrounding wells within the model. **There were a number of unknowns in that**, and, no, we did not go to that resolution of...detail."<sup>53</sup> Mr. McCormick continued, "...we're not talking about, in my opinion, substantial water level changes to justify going at a water-right-by-water-right basis and doing an examination."<sup>54</sup>

Mr. McCormick also testified at length as to the way that the model accounts for pumping by other users during times of high water usage and the relative lack of value in modeling additional alternative scenarios in that regard. Mr. McCormick stated, "...we pretty much included that [an estimate of collective irrigation pumping during drought], I mean, we're looking at...an annual average of pumping in a drought period, which is 2011 to 2012, and we evaluated those statistics."<sup>55</sup> When asked whether it would have been beneficial to "alter the different pumping scenarios in the modeling," Mr. McCormick replied, "I don't believe it would provide significant water level changes in this instance...the amount of water over that period of

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<sup>52</sup>*Id.* at 2566, ll. 1-10.

<sup>53</sup>*Id.* at 3508, ll. 10-16.

<sup>54</sup>*Id.* at 871, ll. 9-12.

<sup>55</sup>*Id.* at 1116, l. 24 – p. 1117, ll. 1-21.

time, I don't believe would result in significant water level changes....Basically, you get down into the weeds so far that...the precision of your answer doesn't change much...you could go to a lot of effort...with diminishing return on the value of your answer...we have DWR reported values that I think are adequately representative...<sup>56</sup> Mr. McCormick also answered simply, "no," when asked whether the City's model would have been more accurate if it had further taken into account the "changes in irrigation pumping and other forms of pumping such as industrial or other municipal."<sup>57</sup> Mr. McCormick then went on to explain that to even attempt to account for those things to any greater extent than the model already does would have caused the potential error in the model's inputs to "just skyrocket and become unacceptable."<sup>58</sup>

More testimony by Mr. McCormick illustrates the lengths the District went to in order to elicit testimony that the City's modeling was deficient, and the District's own lack of understanding of the modeling that it actually demonstrated in doing so. When asked whether the City's model should have accounted for water use by irrigators who were still using multi-year flex accounts in 2013, Mr. McCormick responded:

You[ve] got to remember we're out of the drought at that point, so there's a much higher precipitation rate, so they're not pumping as much, so that sort of negates that evaluation. If...we had continued through a five-year drought...we would have seen what would have happened. But at no time that I'm aware of did we see an actual occurrence of that that would provide a data set that would be useful in that way.<sup>59</sup>

Mr. McCormick ultimately answered, "I would say so," when asked whether the City's modeling utilized the best data available to simulate irrigation pumping.<sup>60</sup> Finally, Mr. Letourneau testified

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<sup>56</sup>Tr, p. 868, ll. 23-24; p. 869, ll. 23-25.

<sup>57</sup>*Id.* at 1116, ll. 14-24.

<sup>58</sup>*Id.*

<sup>59</sup>*Id.* at 1118, ll. 2-19.

<sup>60</sup>*Id.* at 1118, ll. 20-24.

that DWR modelers Sam Perkins, Jim Bagley, Chris Beightel, and Ginger Pugh reviewed the City's modeling work before Chief Engineer Barfield made the initial determination that the Proposal was reasonable and could go forward.<sup>61</sup>

The Recommended Order also says that the District raised concerns as to the practical saturated thickness of the Aquifer reflected in the City's model, and cites testimony from Mr. Letourneau in support of that conclusion. However, examination of the full record reveals that the District did not actually raise any legitimate concerns in this regard. Mr. Clement testified at length to the ways that the model accounts for practical saturated thickness. When asked by the District's counsel whether it was true that a specific table within the Proposal did not account for practical saturated thickness, Mr. Clement stated:

Well, it doesn't list practical saturated thickness. From the standpoint that the model represents those changes, the K-values that are within the model represent...the ability of water to move through sands or any system, that is basically called hydraulic conductivity. The model uses this term and adjusts up and down for each cell or each group of cells what we think the hydraulic conductivity is, in other words how sandy it is, how clay-y is it, so we can adjust how water moves within the system. From that standpoint, it [practical saturated thickness] is in here [the model] in terms of what we think the relative changes will be.<sup>62</sup>

Mr. Clement also testified, "the model itself contains different hydraulic conductivity values based on what we think the lithology is."<sup>63</sup> When asked about examining practical saturated thickness at individual well locations rather than employing the basin-wide approach used in the model, Mr. Clement testified, "I didn't necessarily see the value in that. I mean, one could do that in theory but probably not a whole lot of value relative to this [the Proposal]."<sup>64</sup>

Mr. Clement went on to say:

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<sup>61</sup>Tr, p. 1370, ll. 2-3; p. 1372, ll. 16-19.

<sup>62</sup>*Id.* at 989, ll. 8-22.

<sup>63</sup>*Id.* at 993, ll. 1-4.

<sup>64</sup>*Id.* at 994, ll. 7-25 – p. 995, ll. 1-10.

the modeled results are accurate in terms of what they predict in terms of water level change, so the ending elevation of the model in stress period eight [at the end of a one percent drought] is represented by, and relative to your question, practical saturated thickness, the clays that we think that are in the actual aquifer, we're trying to simulate that by lowering the hydraulic conductivity. USGS used well logs for that effort to find areas where clays did or didn't exist.<sup>65</sup>

He also testified, “we think we have the relevant saturated thicknesses and feet of thickness left in terms of saturation that are represented within the model results.”<sup>66</sup>

When the District was unable to get the answers it wanted from Mr. Clement related to practical saturated thickness, it turned to questioning Mr. Letourneau on the topic. Mr. Letourneau did testify on cross examination that the well logs that the District asked him to examine could raise questions related to practical saturated thickness. However, the entirety of Mr. Letourneau’s testimony on this topic still illustrates that there is no real reason to be concerned about the practical saturated thickness of the Aquifer in the context of the Proposal and the adequacy of the City’s modeling.

Most importantly, the well logs that the District asked Mr. Letourneau to examine were not related to production wells, but rather to observation wells that are used for environmental monitoring purposes. Mr. Letourneau testified that monitoring wells are not relevant to a determination of practical saturated thickness.<sup>67</sup> Secondly, the well logs that the District had Mr. Letourneau examine were for wells located in index cells 1, 2, 10, and 21. Index cells 1 and 2 are located on the northwesternmost edge of the BSA, and, as such, practical saturated thickness in those index cells does not accurately reflect practical saturated thickness in the heart of the Equus Beds Wellfield. Moreover, the well log related to index cell 1 that Mr. Letourneau

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<sup>65</sup>*Id.* at 996, ll. 5-14.

<sup>66</sup>Tr., p. 1002, ll. 2-5.

<sup>67</sup>*Id.* at 1991, ll. 11-15.

testified about was for a well located on the northernmost edge of index cell 1, essentially as far north within the BSA as it is possible to be. Mr. Letourneau said as much, stating, "...the location of that particular index well [within index cell 1] is to the extreme north of that [index cell 1], so it looks like it's probably at the very edge of the aquifer. I wouldn't expect that well to be very good."<sup>68</sup>

Likewise, when asked whether he had concerns about practical saturated thickness based on the well log for the monitoring well within index cell 2, Mr. Letourneau answered, "No...because it's on the...upper edge of the aquifer."<sup>69</sup> Further, Mr. Letourneau testified that index cell 21 experiences a high rate of recharge and there is thus no real reason to focus on practical saturated thickness as opposed to overall saturated thickness within that index cell.<sup>70</sup> Mr. Letourneau also echoed Mr. Clement's testimony that looking at practical saturated thickness based on one well log has less utility than looking at saturated thickness on a basin-wide scale, as the City's model does.<sup>71</sup> It is DWR's opinion that the District did not raise any legitimate concerns or issues related to the practical saturated thickness of the Aquifer in the context of the Proposal, and the Recommended Order ignores significant portions of the record that support that opinion.

As to the issue of the model's 10-foot contingency, Mr. McCormick testified, "As I recall, the way that came about, we originally put a 5-foot contingency on that, and when we met with the GMD...Mr. Boese questioned whether 5 was enough and asked if we wanted to do 10, and we said we could do 5 or 10. And 10 was selected based on the number of unknowns and

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<sup>68</sup>*Id.* at 1557, ll. 21-25.

<sup>69</sup>*Id.* at 1566, ll. 21-22.

<sup>70</sup>*Id.* at 1580, ll. 6-22. The map in Figure 4.1 of the City's Proposal illustrates that Kisiwa Creek flows through index cell 21. That surface water source would result in a high rate of recharge within index cell 21.

<sup>71</sup>Tr., p. 1567, ll. 18-25 – p. 1568, ll. 1-6.

unforeseen circumstances.<sup>72</sup> It is DWR's opinion that this entire section of the record containing that quoted testimony from Mr. McCormick demonstrates the lengths the District attempted to go to in order to have Mr. McCormick testify that there was some issue with the contingency and that there is not, in fact, any such issue. DWR does not believe any legitimate substantive concerns were raised as to the contingency used in the model.

The Recommended Order also states that both Mr. Clement and Mr. McCormick testified that they did not analyze or address "the Proposal's potential to cause impairment, impacts to water quality, safe yield or how the Proposal would impact the public interest."<sup>73</sup> While Mr. McCormick and Mr. Clement did testify that they did not analyze those elements per se, Mr. Clement particularly testified that the model does in fact reflect the Proposal's impact on those things by accurately reflecting the changes in water levels that will occur under the Proposal. He stated, "we have [in the model] water level changes and that relative impact to sustainability or safe yield."<sup>74</sup>

Mr. McCormick testified that his analysis was "more technically oriented" and did not explicitly address issues of water quality, streamflow, or safe yield. However, it is the technical analysis that Mr. McCormick referenced that forms the foundation for a model's suitability for evaluating issues of impairment, water quality, and streamflow. If a model is technically sound, which DWR believes the record shows this model is, then the resulting water table that it shows can be used to analyze the potential for those things. It continues to be DWR's position that the

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<sup>72</sup>*Id.* at 1159, ll. 5-16.

<sup>73</sup>Recommended Order, p. 160.

<sup>74</sup>Tr., p. 1006, ll. 20-22.

City's modeling work was adequate and can be used to evaluate the impacts of the Proposal effectively, and DWR believes that that opinion is supported by ample hearing testimony.

G. The City's Proposed AMC Accounting Method is Adequate

The Presiding Officer found that the accounting method that the City has proposed to track its accumulation of AMCs was inadequate. This determination is related to the finding that the City's modeling work was inadequate, as the Proposal's MODFLOW model is also used for Project accounting purposes. In support of this conclusion, the Recommended Order cites the fact that an error that was contained in the 2016 Project accounting report and was repeated in the Proposal reveals that the City's physical recharge credit retention rate during 2016 was not actually as high as the value that was initially included in the Proposal purported it to be.<sup>75</sup> However, as discussed in DWR's Reply Brief, this fact is really not relevant in and of itself because it says nothing about the correlation between the erroneous physical recharge credit retention rate contained in the 2016 accounting report and the proposed AMC accounting method. Mr. McCormick testified as to the correct 2016 physical recharge credit retention rate that should have been reflected in the Proposal, and, had AMC retention as well as physical recharge credit retention been calculated for 2016, that value very likely would have been approximately the same as the correct physical recharge credit retention rate. This entire issue really has nothing to do with the adequacy of the City's proposed AMC accounting method.

The Recommended Order also focuses on the fact that the Proposal's accounting methodology relies on an initial theoretical AMC retention rate of 95 percent and states that the use of this value reflects a deviation from actual aquifer conditions that is not supported by the

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<sup>75</sup>Recommended Order, p. 176.



record.<sup>76</sup> Essentially, the Presiding Officer believes that the Proposal does not adequately account for the fact that recharge credit retention rate is reduced once the fullness of the Aquifer exceeds the threshold at which the Aquifer begins to lose water to the overlying streams. DWR believes that the City has adequately justified the proposed initial 95 percent retention rate for AMCs and believes that such a finding is supported in the hearing record.

The way the five percent initial loss value for AMCs was determined was explored during the hearing: the City could retain 95% of its recharge credits (for both physical recharge credits or AMCs) if it pumped the Aquifer down to 1998 levels in order to reduce the amount of water lost from the Aquifer to the river.<sup>77</sup> Thus, the City is credited with 95% initial recharge credit retention in order to avoid a scenario where the City is incentivized to pump the Aquifer down in order to achieve a water table where its credit retention is maximized.<sup>78</sup> Accordingly, the City's proposed AMC accounting method does account for the impacts of aquifer fullness on recharge credit retention. Perhaps the Presiding Officer would have preferred a different explanation as to the proposed accounting method's use of a theoretical 95 percent initial AMC retention rate, but it is not accurate to say that no explanation or supporting evidence was provided as to that aspect of the Proposal. DWR continues to believe that the City's proposed AMC accounting method is adequate. Moreover, even if it was not, that is not a reason to deny the entire Proposal, as the accounting method can easily be reviewed and adjusted at any time.

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<sup>76</sup>*Id.* at 176-177.

<sup>77</sup>Tr., p. 1887, ll. 3-21.

<sup>78</sup>*Id.*

H. The Proposal Will Not Result in Impairment or Prejudicially or Unreasonably Affect the Public Interest.

The Recommended Order explores at length the Proposal's impact on the public interest, including its effect on the Aquifer's water table, streamflow, water quality, and safe yield, and whether the Proposal will result in impairment to existing area water rights. Much of this discussion is rooted in the Presiding Officer's finding that the Proposal would constitute a new appropriation of water and therefore must be evaluated pursuant to the criteria set out in K.S.A. 82a-711. As set out herein, DWR does not believe that the Proposal would constitute a new appropriation of water and thus does not believe that strict evaluation pursuant to all of those criteria is necessary. DWR's regulations also exempt aquifer storage and recovery recharge and recovery wells from a per se safe yield analysis. Because of this, and because of the fact that DWR believes the City's modeling work is adequate to evaluate the impacts of the Proposal, DWR is of the opinion that impairment and public interest evaluations can be made simply using the City's model.

The model shows that, even at the end of a one percent drought in which the City has used all of the water that the Proposal would allow it to, the Aquifer will remain more than 80 percent full on average.<sup>79</sup> DWR does not believe that the Aquifer being at this level will result in impairment or will adversely impact streamflow or water quality, or otherwise affect the public interest, to any degree that is prejudicial or unreasonable. Additionally, it is important to bear in mind that this scenario represents a worst-case scenario that only has the statistical probability to occur one percent of the time. During the 99 percent of the time that the area is not experiencing

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<sup>79</sup>City's Exhibit 1, Proposal, p. 2-16.

a one percent drought, the Proposal will certainly not cause impairment or negatively impact the public interest.

To the contrary, it will facilitate maintenance of the Aquifer at the fullest level possible, providing a universal benefit to the Aquifer's water table and associated benefits to streamflow, water quality, and the efficient use of other area water rights. Additionally, the record illustrates that, by the nature of all of the water sources that the City relies on, it will be incentivized to keep the Aquifer full for as long as it can. The City taking water from the Aquifer during times that it could use its water rights on Cheney Reservoir instead effectively wastes the City's water overall—water in Cheney Reservoir evaporates faster than it can be used if the City does not rely primarily on that water source to meet its normal municipal demand.<sup>80</sup>

The Recommended Order cites testimony from Mr. Romero that, based on his analysis, “up to 35 wells could lose their water column as a result of the Proposal.”<sup>81</sup> This statement is not actually an accurate reflection of Mr. Romero's testimony (or at least of the practical implication of that testimony). Mr. Romero testified that he found 29 wells could *potentially* lose their water columns as a result of the City pumping the entirety of the authorized quantity of its native rights in the Equus Beds Wellfield and that an additional six wells could *potentially* lose their water columns as a result of the City withdrawing credits below the current minimum index levels.<sup>82</sup> The City is permitted to pump its native rights below the current minimum index levels—the minimum index levels only apply in the context of the Project. Accordingly, the number of wells that could potentially lose their water columns as a result of the City pumping all of its native

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<sup>80</sup>Mr. Letourneau testified, “Cheney evaporates faster than they [the City] were using it, and so that's why they shifted, then, to the use of Cheney because they didn't want to lose it to evaporation.” Tr., p. 1243, ll. 13-16.

<sup>81</sup>Recommended Order, p. 167.

<sup>82</sup>Tr., p. 2532, ll. 1-10.

rights is not actually relevant to the Proposal itself. Mr. Romero effectively testified that he had identified only six wells that would *potentially* be impacted as a result of lowering the Project's minimum index levels. There are a number of reasons that DWR does not believe Mr. Romero's testimony constitutes grounds to deny the Proposal.

First, a well is not necessarily legally impaired just because it has to be drilled deeper in order to be able to access water.<sup>83</sup> Additionally, Mr. Romero did not testify that he had identified any wells that would certainly lose their water column as a result of the Proposal, or were even more likely than not to do so. In the unlikely event it does become necessary to administer the City's Project water appropriation permits because of impairment, DWR will do so in accordance with the doctrine of prior appropriation and all of its established procedures.<sup>84</sup> DWR's impairment regulations require specific and particularized findings as to the state of the allegedly impaired well(s) at the time an impairment complaint is made.<sup>85</sup> One of the reasons for this is the inherent inability to know for certain which specific wells will cause impacts to streamflow or impairment in a future drought. For example, even if some wells did lose their water columns during a drought, Mr. Romero's analysis does not illustrate, and there is really no way to know, which specific other wells would really be responsible. One or more of the City's wells could be the cause, but so could any number of other wells in the wellfield. DWR does not believe that the fact that a single City well might someday cause one other well to lose its water column is not grounds to deny the entire Proposal.

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<sup>83</sup>DWR's regulations allow the Chief Engineer to decline to even initiate an impairment investigation unless the water right owner alleging impairment provides evidence illustrating the extent to which the allegedly impaired well has "fully penetrated" the usable portion of an aquifer. *See* K.A.R. 5-4-1.

<sup>85</sup>*See id.*

Next, as discussed, the Phase II MOU requires the City to make whole any domestic well owner within 660 feet of a Project well who is impacted by the City’s water use under the Proposal. The City has expressed its continued commitment to doing so, and a permit condition to that effect can be crafted. If drilling an impacted well deeper does not allow the well to access useable water, then that well would likely be found to be legally impaired, and DWR would administer the impairing wells as necessary. The Recommended Order raises concerns that neither MOU commitments nor permit conditions adequately protect wells located farther than 660 feet from a Project well or non-domestic wells that could potentially be impacted. DWR believes it is very unlikely that a well farther than 660 feet from a Project well would be impacted by the Proposal and, again, if any such well is impacted, DWR’s impairment procedures will be used to restore that well’s water supply. The same applies to any non-domestic well that is impacted by the City’s water use under the Proposal—DWR’s impairment procedures will protect those wells if necessary.

The Recommended Order also states that neither permit conditions that would require the City to make impacted water right owners whole nor DWR’s impairment procedures provide an adequate means to determine “who would bear the expense of proving the fact of impact, the causation of the impact, what the acceptable standard of proof would be, or who would enforce the remedy in the event of a disagreement between the owner of the impacted well and the City.”<sup>86</sup> This point disregards K.S.A. 82a-716, which provides, “If any appropriation, or the construction and operation of authorized diversion works results in an injury to any common-law claimant, such person shall be entitled to due compensation in a suitable action at law against the appropriator for damages proved for any property taken.” An action of the type provided for in

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<sup>86</sup>Recommended Order, p. 167.

that statute would be the appropriate forum for determining all of the things the Recommended Order mentions. This was raised in DWR's Post-Hearing Brief but was not mentioned in the Recommended Order.<sup>87</sup>

It is also worth noting that, practically speaking, during a drought, large capacity wells like the City's are likely to lose the ability to pump significantly sooner than a domestic well with a much smaller capacity. For all of these reasons, DWR believes the City has made an adequate showing that the Proposal will not result in the impairment of existing water rights and does not believe the Proposal should be denied on the basis of a hypothetical future impairment that DWR would remedy in the unlikely event it did occur.

DWR's MDS regulations also require specific and particularized findings as to the state of the relevant stream at the time of administration and require administration to cease as soon as MDS is restored.<sup>88</sup> Additionally, in the event flows on the Little Arkansas River hit the 20 cfs MDS trigger at the Valley Center gage, the Phase II surface water intake right will have already ceased operating by the terms of its own permit and would not need to be administered.<sup>89</sup> Further, DWR does not ever curtail the pumping of groundwater rights in the Little Arkansas River basin as part of MDS administration because groundwater and surface water in the basin have not been shown to be interconnected to the extent that doing so would impact surface water flows.<sup>90</sup>

Finally, the Recommended Order cites testimony from Mr. Letourneau that DWR does not analyze potential impacts to MDS even when considering a new application.<sup>91</sup> Given this fact

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<sup>87</sup>DWR Post-Hearing Brief, pp. 70-71.

<sup>88</sup>See K.A.R. 5-15-1; K.A.R. 5-15-3.

<sup>89</sup>See Approval of Application and Permit to Proceed for Water Right File number 46,627, dated Sept. 18, 2009.

<sup>90</sup>Tr., p. 1754, ll. 8-25; p. 1755, ll. 1-8.

<sup>91</sup>Recommended Order, p. 105; Tr., pp. 1681-1682.

particularly, DWR does not believe a finding that the City did not make an adequate showing as to the Proposal's impact on streamflow is supported by the record—to hold the City to a standard that even applicants seeking a new appropriation are not held to does not seem to be fair or to set a desirable precedent. The Proposal will facilitate the Little Arkansas River gaining water from the Aquifer the vast majority of the time, and it would not be in line with DWR's normal practices to deny even an application for a new groundwater appropriation based on a future potential for impairment or impact to streamflow that is as unlikely and speculative as that that has been raised here. DWR does not believe that the Proposal is likely to cause impairment to existing water rights or to prejudicially or unreasonably affect the public interest and believes the City has made an adequate showing in that regard.

I. AMCs Will Not Create a Two-for-One Situation as it Pertains to the Beneficial Uses the City Could Make of its Water.

DWR also does not agree with the Presiding Officer's findings that the AMC aspect of the Proposal would essentially allow the City to have two consumptive municipal uses of water for the price of one. One "cycle" of the Project currently yields the City two consumptive municipal uses of water, and that will be the same result of one "cycle" of the Project under the Proposal. This is another reason DWR does not believe it is necessary to require the City to draw down the Aquifer's water table any time it wants to be able to accumulate recharge credits.<sup>92</sup>

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<sup>92</sup>The Recommended Order states, "The City characterizes this management approach of pumping groundwater to make space for credits as something it is being forced to do, and will be forced to do, without approval of the AMCs. This characterization is not supported by the record. The evidence shows that this approach would be a voluntary choice by the City and lawful under the City's ASR permits. Moreover, the evidence shows that this approach would likely create negative impacts, including increasing the risk to water quality." Recommended Order, p. 161. DWR agrees that the management approach of pumping down the Aquifer's water table to make space for credit accumulation would be a voluntary choice by the City and would be lawful under their existing permits. DWR also agrees that such an approach would not be good stewardship of the Aquifer. This illustrates exactly why the City has need for the Proposal.

DWR's Post-Hearing Brief sets out DWR's position related to the "two-for-one" argument in more detail.<sup>93</sup>

#### J. The Proposal Complies with Relevant Requirements

DWR believes that the Proposal comports with all of the requirements that are strictly applicable to it. The relevant requirements are the definitions for "minimum index level" and "recharge credit" set forth in K.A.R. 5-1-1, as well as the relevant requirements imposed by the governing findings and orders. K.A.R. 5-1-1 provides that "minimum index level" means 20 feet above the bedrock elevation or an alternatively proposed minimum elevation for storage within a basin storage area..." The City has proposed definitive minimum index levels for each index cell within the Basin Storage Area ("BSA") and all such proposed levels are more than 20 feet above the Aquifer's bedrock elevation.<sup>94</sup>

K.A.R. 5-1-1 also provides that "recharge credit" means "the quantity of water that is stored in the basin storage area and that is available for subsequent appropriation for beneficial use by the operator of the aquifer storage and recovery system."<sup>95</sup> As already discussed, the water the City would withdraw from the BSA based on its accumulation of AMCs under the Proposal would be stored in the BSA. AMCs would be available for subsequent appropriation because the volume of water the City would be permitted to withdraw based on its accumulation of AMCs would continue to be limited by the annual authorized quantity of each Project recharge and recovery well. Finally, the City is the operator of the Project.<sup>96</sup>

The Phase I Findings and Orders required that any proposed change in the Project's recharge credit accounting method improve the existing accounting method and be adequate to allow the City to comply with K.A.R. 5-12-2(a) and (b), which governs aquifer storage and recovery accounting reports.<sup>97</sup> K.A.R. 5-12-2(a) provides that an aquifer storage and recovery system permit-holder is required to file an

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<sup>93</sup>See DWR Post-Hearing Brief, pp. 31-34.

<sup>94</sup>City's Exhibit 1, Proposal, p. 2-25, table 2-11.

<sup>95</sup>K.A.R. 5-1-1.

<sup>96</sup>See Phase I Findings and Orders; Phase II Findings and Orders.

<sup>97</sup>Phase I Findings and Orders, p. 12, para. 16.



annual accounting report that accounts for all water entering and leaving the basin storage area and specifically computes the amount of recharge credits held in the basin storage area.<sup>98</sup> K.A.R. 5-12-2(b) provides that the annual accounting report shall “address the items in the water balance for the basin storage area” and lists eight items that the report “may” include.<sup>99</sup> K.A.R. 5-1-1(0000) provides that “water balance” means “the method of determining the amount of water in storage in a basin storage area by accounting for inflow to, outflow from, and changes in storage in that basin storage area.”<sup>100</sup>

The accounting method that the City has proposed to track its accumulation of AMCs would improve the existing accounting method used to track physical recharge credits because it greatly simplifies the current method, which requires multiple model runs and detailed analyses and is fundamentally ill-suited to tracking AMCs.<sup>101</sup> The Proposal sets forth in detail how the City proposes to account for inflow, outflow, and changes within the BSA and ultimately arrive at the amount of recharge credits available to the City.<sup>102</sup> The City’s accounting reports are not required to include the things that “may” be included in an accounting report pursuant to K.A.R. 5-12-2(b), and a detailed analysis of whether the Proposal will allow the City to include those items in its accounting reports is thus not necessary. The Proposal comports with all applicable requirements.

### **III. PROPOSED PERMIT CONDITIONS**

DWR believes that any order approving the Proposal should be accompanied by the following permit conditions:

1. The rate of accrual of all recharge credits should not be permitted to exceed the constructed physical diversion capacity of the Project’s infrastructure or the authorized rate of diversion and annual authorized quantity of Water Right No. 46,627;
2. the Project’s Phase I recharge and recovery wells should not be permitted to generate AMCs, and AMCs should not be generated if there is space in the Aquifer to allow for the accumulation of physical recharge credits;

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<sup>98</sup>K.A.R. 5-12-2.

<sup>99</sup>*Id.*

<sup>100</sup>K.A.R. 5-1-1.

<sup>101</sup>*See* City’s Exhibit 1, Proposal, p. 4-1.

<sup>102</sup>*Id.* at 4-1 through 4-3.

3. the City's accumulated recharge credits should not exceed 120,000 acre-feet at any given time;
4. the City should not be entitled to withdraw more than 19,000 acre-feet of water annually based on its total recharge credit accumulation;
5. the City should calculate the AMCs it accumulates using an alternative or modified accounting process that is different from the accounting used to track physical recharge credits;
6. AMCs shall be accumulated based on the metered quantity of water diverted from the Little Arkansas River via direct surface water diversions or water captured via bank storage wells and sent directly to the City;
7. the City should adopt the accounting process set out in the Proposal, or an alternative similarly straight-forward spreadsheet accounting process, to track its accumulation and use of AMCs;
8. the City should be required to exhaust its native water rights before it withdraws recharge credits would be appropriate;
9. the City should utilize pumping rotation if conflicts arise between a Project recharge and recovery well and the well of another water right owner located within 660 feet of the Project well; and
10. the City's AMC accounting method should be reviewed by DWR at least every five years to ensure the rate of AMC retention that it reflects is accurate as compared to the City's physical recharge credit retention rate.

#### **IV. CONCLUSION**

DWR continues to believe the City's Proposal is reasonable and lawful and should be approved subject to the suggested permit conditions set out herein. DWR would not have ever signaled that the Proposal could go forward if it did not believe that was the case, and nothing raised over the course of the formal phase public hearing has changed that initial opinion. The Recommended Order has disregarded significant and important portions of the record and has given undue credence to the arguments raised by the District, particularly in light of the almost entirely speculative and often incorrect nature of so many of the

arguments raised by that party. DWR does not believe the Proposal constitutes a new appropriation or will result in impairment or prejudicially and unreasonably affect the public interest. DWR believes the City's modeling work is sound and adequate and constitutes a sufficient showing as to the Proposal's impact on the Aquifer's water table, streamflow, water quality, other water rights, and the public interest generally. DWR believes this position is adequately supported by the Proposal, witness testimony, and the rest of the formal phase public hearing record.

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I certify that on this 11th day of February 2022, the above Comments were electronically filed with the Chief Engineer and that copies were sent via e-mail to the following:

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