

**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)
_____)
Pursuant to K.S.A. 82a-1901 and K.A.R. 5-14-3a

CITY’S COMMENTS ON THE HEARING OFFICER’S RECOMMENDATIONS

The City respectfully submits that the Chief Engineer should not adopt the recommendations of the Hearing Officer as framed, for several reasons. The Hearing Officer did not separately consider the separate elements of the Proposal. She also did not consider several protective conditions proposed or agreed to by the City. She inexplicably omitted all references to significant evidence, including Lane Letourneau’s testimony that AMCs cannot affect safe yield and his testimony that AMCs are not passive recharge credits, as well as all of Dave Romero’s testimony disagreeing with the testimony of Dr. Akhbari. The recommendations propose several unsupported findings, some of which are actually contrary to the evidence in the record.

Additionally, the Hearing Officer made several grave legal and analytical errors, attached undue significance to typographical errors, and perhaps most importantly, failed to understand even very basic premises of the modeling in the case. For example, it is clear from the recommendations that the Hearing Officer never grasped that the Burns & McDonnell modeling was depicting a 1% drought occurring around 2060, with projected 2060 demands and with beginning water levels at 1998 levels based on the premise that the City had lowered them to accumulate and retain physical recharge credits. **The modeling assumes the absence of AMCs.** The Hearing Officer also failed to understand that the Balleau Groundwater modeling presented by Dave Romero picked up the same root assumptions, including the 1998 starting levels. This absence of understanding is made clear by statements of the Hearing Officer such as, “Romero modeled the potential impacts to rivers and wells

in the area caused by AMCs and lowering of the water table; he used an additional analysis package in combination with the proposal's MODFLOW modeling" (Recommendations, p. 153). In reality, it is ascertainable from the Balleau Groundwater study and Mr. Romero's testimony that he did not do any modeling of the impacts of AMCs. The Hearing Officer looked at modeling that was premised on the absence of AMCs and erroneously concluded that it was modeling impacts of AMCs.

Similarly, the Hearing Officer makes repeated references to the impacts of pumping 120,000 AF of credits and the City's failure to model those impacts (Recommendations, pp. 100, 102, 103, 104, 107, 115, 169). The modeling done by Balleau Groundwater, and Dave Romero's own testimony, established that even with the revised lower limits the maximum credits the City would be able to pump would be an aggregate 94,400 AF in credits (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158). Hence, the Hearing Officer is assessing impacts of a 120,000 AF credit withdrawal that the modeling shows to be impossible, and she also posits that the City should have been required to model the impacts of that withdrawal, even though the modeling shows it to be impossible. This, despite the City having pointed out in its Response to the District's Proposed Findings & Conclusions (p. 18) that Romero's modeling and testimony showed the 120,000 AF withdrawal of credits to be impossible. The Hearing Officer's failures to understand the modeling and related testimony render many of the recommended findings and conclusions rationally insupportable to the extent that it would be an abuse of discretion to adopt them.

As to issues which the Hearing Officer believed merited further study (Recommendations, p. 174), the sensible approach would be for the Chief Engineer to consult experienced modelers to determine if that is true, and if so, assign technical staff and reopen the record as necessary to accommodate that further study.

Following the general structure of the Hearing Officer's Recommendations, the City will further address those portions to which it is directing comments by their subject headings, page or paragraph numbers as appropriate.

Procedural History Overview (¶¶ 1-24)

In paragraph 3, the Hearing Officer omits that prior to the submission of the Proposal, Mr. Barfield, then Chief Engineer, who had extensive modeling experience, had written a letter thanking the City for its detailed work responsive to his request that the City demonstrate and establish reasonable bottoms to the basin storage area which meet both the needs of the City for the ASR project and assure the public that the ASR can be operated without raising significant water supply concerns from others accessing the aquifer. The Hearing Officer also left out that the letter further stated, "From our review of the draft report, it appears the City's methods are sufficient for this purpose. While there are no perfect models, we believe the existing model is sufficient for this purpose. It also appears the City's assumptions and data are sufficient as used in this analysis." (See, Transcript, Vol. V, pp. 1250 -1251). DWR's modeling group also believed the City's modeling work was sufficient and had been informed by the City that the City could afford to do additional modeling work if what had been done to that point was not sufficient (See, Transcript, Vol. V., p. 1252).

In paragraph 7, the Hearing Officer neglected to note that none of the well owners who had been asked in 2010 to approve requests for spacing waivers (i.e., U.S. National Bank, Assoc., Jerry & Elnora Morris Trust, Kelly J. Willmore, Linda L. Heidebrecht and Pauline Decker, as shown on the District's Exhibit 57) were among the intervenors.

In paragraph 8, the Hearing Officer neglected to note that the reason for the Motion to Withdraw on behalf of the McGinns and Seilers was the conflict of interest posed by the service of Michael McGinn and Robert Seiler on the District Board (Motion to Withdraw as a Party, ¶¶ 1-3). The Hearing Officer further neglected to note that the Motion to Withdraw had no effect on the continuing participation of Michael McGinn and Robert Seiler in the District Board's conduct of the

continuing litigation. The Hearing Officer appears to have declined to take note of Kansas appellate precedent recognizing that in such circumstances, the conduct of the impacted public body is tainted by conflict and invalid. *See, Dowling Realty v. City of Shawnee*, 32 Kan. App. 2d 536, 546 (2004). Because of the conflicts, the City requested (and again requests) that the Chief Engineer consult with the Kansas Attorney General's Office as to whether the positions put forward as District positions in the case can actually be accepted as such, the import of *Dowling Realty v. City of Shawnee*, 32 Kan. App. 2d 536, 546 (2004) being to the contrary.

In paragraph 11, the Hearing Officer omits that Chief Engineer Barfield also ordered an internal separation such that Mr. Letourneau (the only DWR staffer to testify at hearing) had no access to the DWR staff modelers who had reviewed (Transcript, Vol. VIII, p. 1978, lines 6-10). Further, Mr. Letourneau is not himself a modeler (Transcript, Vol. V, p. 1250, lines 12-15).

In paragraph 13, the portion of the order that indicated, "it is the purpose of these hearings to determine if and under what circumstances such modifications to the existing permits should be made," suggests that the delegation to the Hearing Officer was to consider and evaluate, rather than disregard, protective conditions identified in the Proposal or during the hearings. In addition, the Hearing Officer's paragraph does not mention that the Chief Engineer designated Chris Beightel to continue to be separated from DWR in order to be available to, and assist the Hearing Officer with, technical matters (March 19, 2019 Notice of Delegation and Temporary Postponement). However, the Hearing Officer declined to consult with Mr. Beightel because he had some prior involvement with review of the City's Proposal.

In paragraph 19, the March 2, 2020 Order referred as affirming the delegation to the Hearing Officer contained no provision for technical assistance.

In paragraph 20, the November 2, 2020 Notice referred to also contained no provision for technical assistance. As a consequence, the Hearing officer was left to sort through and interpret the

modeling studies and technical testimony in the case without the benefit of technical assistance from experienced modelers.

Paragraph 24 recognizes that certain filings were submitted by the parties, but does not disclose whether the Hearing Officer actually reviewed all the filings submitted. From certain of the recommendations, it appears that the Hearing Officer failed to consider important evidence highlighted in some of the submissions.

Public Comments

The people and entities submitting public comments are listed on pages 12-15 of the Hearing Officer's recommendations. Omitted from the Hearing Officer's discussion is any recognition that the well owners who had been asked in 2010 to approve spacing waivers (as shown on the District's Exhibit 57) were not among the people and entities submitting comments.

The reasons given by commenters for opposing the Proposal, as recounted on pages 15-17 of the Hearing Officer's recommendations do not reflect any consideration of the comparative impacts if the aquifer were to be reduced to and maintained at 1998 water levels to accommodate efficient injection of treated source water and retention of credits under current ASR Phase II permit conditions.

Applicable Statutes, Regulations and Legal Standards

On page 21, it is unclear why the Hearing Officer referred to K.A.R. 5-1-1 regulations instead of the K.A.R 5-22-1, *et seq.*, regulations that apply within the District.

With respect to K.A.R. 5-12-1, cited by the hearing Officer on page 22 of her recommendations, it is notable that subsection (b) illustrates the regulations are centered around storage area geometry and do not mention anything about the Basin Storage Area bottoms or tops preventing impairment, protecting the public interest, or being based on reasonable raising or lowering of water levels.

Notably, 1993 levels were not chosen as the lower index levels based on reasonable or unreasonable lowering of the water table, but because they represented historic low levels. DWR has not determined a reasonable or unreasonable lowering for the Equus Beds area, and for perspective, in Western Kansas, a managed decline depleting aquifer levels to bedrock has apparently been deemed reasonable.

I. FINDINGS OF FACT

The Hearing Officer's Introductory language asserts that the recommended findings are "based on a comprehensive review of the record as a whole," and "substantial competent evidence within that record." The findings should be so based, but the findings as recommended by the Hearing Officer are not so based. As shown hereafter, instead of a comprehensive review of the record as a whole, the Hearing Officer disregarded and omitted from her recommendations most of the evidence that conflicted with the findings proposed in her recommendations. Some of the recommended findings are demonstrably erroneous.

Paragraph 15.c. is not incorrect as stated, but the cited text does not say that a lower minimum index level would not protect the public interest. Further, the Hearing Officer omits that there was no similar language in the ASR Phase II approval, in which the language setting the lower index levels was, "The recharge credits may be withdrawn from a cell only when recharge credits are determined to be available from the cell and the static water level at its index well is above the lowest index level; however, water may be recharged when the static water level is below the lowest index level in that well" (September 18, 2009 Initial Order, p. 5, ¶ 8).

In paragraph 22.c.i., notably, the term "passive recharge credits" is not defined, and it is also not defined in statutes or regulations. Further, the permission to inject treated source water below the minimum index levels (as referenced in paragraph 22.c.vi) cuts against the Hearing Officer's later conclusion that water below the minimum index level is a different source of supply.

In paragraph 24.c., the Hearing Officer relies on the testimony of Tim Boese for the characterization that the specific limit on credit recovery in each permit was “reflecting the 1993 levels for each index cell.” However, the most cursory review of the permits shows that the limit was expressed as a specific elevation, as illustrated by the “1,387 mean sea level” in the specific permit referenced in the subparagraph. Later, there was a collaborative effort of the City, DWR, the District and USGS to reset the stated lower index levels for the ASR Phase I and ASR Phase II permits (Transcript, Vol. IV, p. 1057, line 5, through p. 1058, line 12).

In paragraph 26, the Hearing Officer disregards issues that have arisen as to the status and continuing effectiveness of the MOU, due to the District’s failure to participate in the periodic reassessments provided for in the MOU. Further, throughout the recommendations, the Hearing Officer persistently ignores the import of “Issue 6” of the MOU, in which the parties stipulated that “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.” Contrary to numerous unfounded assertions throughout the recommendations, this stipulation is not only substantial competent evidence, but overwhelmingly powerful evidence, that if the lower limits are not modified, the separate AMC component of the Proposal poses no threat of impairment. Notably, the Phase II MOU contained no agreement to permanently establish specific lower index levels. The language in subparagraph A.6. simply acknowledged the then-existing lower index levels, stating, “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.” (Phase II MOU, subparagraph A.6.). Further, language in subparagraph B.2. recognized that commitments set forth in the MOU remained subject to state law and regulations and the orders of DWR (Phase II MOU, subparagraph B.2.). So, if there were a state regulation that allowed the lower index levels to be set on a different basis, and the Chief Engineer found on the evidence of record that the levels should be reset as requested in the Proposal,

that would not be contrary to anything in the Phase II MOU (Phase II MOU, subparagraphs A.6. and B.2.). Additionally, despite the District's apparent abandonment of the MOU, the City has agreed to a protective permit condition for domestic wells within 660 feet of ASR physical recharge sites (Transcript, Vol. V, p. 1265, line 2, through p. 1266, line 9).

In paragraph 27, while it is true that the MOU refers to GMD2 granting petitions for spacing waivers, it is actually the Chief Engineer who has the ultimate authority to waive regulatory requirements (see, Finding 20, and Transcript, Vol. VII, p. 1840, line 15, through p. 1842, line 2). Further, although the MOU does use the phrase "would not unreasonably impair the public interest," "impairment" for water rights purposes is a concept that relates to existing senior water rights, and not to "the public interest" in general.

In paragraph 29, the Hearing Officer garbled the testimony of the witness, confusing the spacing and waiver requirements he identified for domestic and non-domestic wells. The Finding should be rejected, or corrected to match the testimony, as in its current form it incorrectly suggests that the spacing requirement for domestic wells is 1320 feet and the witness never said that (Transcript, Vol. 11, p. 2959, lines 1-15). Additionally, the portion of the Finding that states (because the witness claimed) that waivers for non-domestic spacing require approval of the District board is wrong, and the Hearing Officer has already acknowledged that the Chief Engineer has the power to grant these waivers (See, Finding 20).

In paragraph 33, the Hearing Officer notes that the aggregate limit on annual credit withdrawals under the thirty permits for which modification is sought is 18,000 AF, because File No. 47,400 is not included on the list of permits for which modification is sought. However, it should be noted (and Findings 24 and 25 recognize) that the total for all 31 ASR Phase II permits is 19,000 AF. Later in the recommendations, the Hearing Officer appears to assume that non-inclusion of File No. 47,400 in the list of permits to be modified means its 1,000 AF of authorized annual credit withdrawal goes away. There is no rational basis for such a conclusion, although the withdrawals for

that permit would remain limited to physical recharge credits. (And again, although the Hearing Officer failed to understand this, the City's modeling assumes that all the credits pumped during the modeled 1% drought are physical recharge credits, and that is why the starting water levels are the 1998 levels).

In paragraph 38, despite the referenced testimony that the Bentley Reserve well field and E&S well field were not "firm sources," the Hearing Officer appears to have missed that Scott Macey's testimony reflects he did account for the E&S well field and Bentley Reserve when the model indicated water would be available from those sources (Transcript, Vol. III, p. 635, line 20, through p. 636, line 7). Accordingly, the Finding as framed is erroneous.

In paragraph 42, the main relevance of the cited testimony is that it limits the significance of any arguable clash in priority between rights approved after the original grant of the ASR Phase II permits and AMCs, as the Hearing Officer here recognizes that only some small use permits have been approved in the District since its safe yield regulations took effect.

In paragraph 46, the main relevance of the cited testimony is that it establishes the only useful role of ASR Phase II lies in its potential to produce credits for drought mitigation. Although the Hearing Officer later observes that the City will not be "forced" to reduce the aquifer to 1998 levels to accommodate creation and retention of credits, such a course will be necessary for ASR to be useful for the City's water supply purposes.

In paragraph 53, the Hearing Officer's statement that the water left in storage would be water previously injected in the aquifer is not supported by the referenced testimony. Water left in storage due to use of treated water directly from the river could be either water previously injected or water the City would have been entitled to draw under its native rights (Transcript, Vol. VII, p. 1828, lines 16-17). The Hearing Officer appears not to have understood the Proposal on this point. The statement at the end of the paragraph that the water left in storage would be water previously injected for a credit is also not supported by the referenced testimony. The Finding as framed

inaccurately characterizes the Proposal, is not supported by the evidence and should be rejected as erroneous.

In paragraph 56, it is uncontroverted that AMCs are not specifically referenced in existing statute or regulations. However, the Hearing Officer's statement that they are not authorized by existing statutes or regulations is quite controverted, because recharge credits are authorized and Lane Letourneau testified AMCs are a "recharge credit" (Transcript, Vol. VII, p. 1727, line 18 through p. 1728, line 4). The proposed Finding, as framed, is contrary to the record and should be rejected as erroneous.

In paragraph 69, K.A.R. 5-22-1, rather than 5-7-1 would supply a definition of "artificial recharge" for the District, but in any event, there is no regulation defining "passive recharge" by reference to artificial recharge.

In paragraph 73, the Hearing Officer omits that Mr. Letourneau also testified that, in DWR's view, the proposed AMCs are not passive recharge credits. (Transcript, Vol. VII. p. 1895, lines 9-11). The Hearing Officer further omits that David Barfield, who was Chief Engineer when the ASR Phase II permits were approved, does not believe AMCs to be passive recharge credits, the distinction being that the AMCs will pass through the ASR diversion and treatment infrastructure and are subject to the rate and quantity limitations of the permit(s). (DWR Exhibit 4, September 18, 2017 letter of David Barfield, p. 1, paragraph 2). The Hearing Officer also omits that Daniel Clement of Burns & McDonnell testified that AMCs are not passive recharge credits because of the link between the aquifer and the Little Arkansas River (Transcript, Vol. IV, p. 951, line 16 through p. 952, line 1). The reasons for these omissions are not explained in the recommendations.

In paragraph 77, the Hearing Officer has altered language from Mr. Pajor's actual testimony. To be clear, the actual language of the question and answer was as follows: Q. And

so if there is an AMC there, a credit that exists under that accounting method, does the existence of that credit depend on the City, in fact, having left water sufficient to satisfy *that credit* in an aquifer in an earlier period? A. Yes. (Transcript, Vol. I, p. 194, lines 4-9, *Italic emphasis added*).

In paragraph 81, the relevance of the cited testimony is that it establishes the City would not accrue an AMC for direct use of water if capacity for physical injection of that water exists. This contradicts the Hearing Officer's later, unsupported assertion that the Proposal does not contain such a feature (Recommendations, p. 162).

In paragraph 86, the Hearing Officer omits that there would, however, be metering of the water taken from the river for direct use (Transcript, Vol. V, p. 1316, lines 8-9).

In paragraphs 87 through 89, the Hearing Officer cites a few aspects of Lane Letourneau's testimony on AMCs' compatibility with ASR regulations. However, the Hearing Officer omits the greater part of Mr. Letourneau's testimony on this subject. For example, the Hearing Officer omitted that Mr. Letourneau testified AMCs are a "recharge credit" because they meet the regulatory definition of a recharge credit (Transcript, Vol. VII, p. 1727, line 18 through p. 1728, line 4). The Hearing Officer also omitted that Mr. Letourneau pointed out that the definition of recharge credits refers to water that is stored, not water that is injected (Transcript, Vol. VII, p. 1730, lines 6-9). The reasons for these omissions are not explained in the recommendations.

In paragraph 96, the Hearing officer omits that Mr. Pajor testified the City would be amenable to a condition that confined use of credits to an appropriately defined drought scenario (Transcript, Vol. II, p. 310, line 20 through p. 311, line 14).

In paragraph 97, the Hearing Officer omits that Mr. Pajor testified use of base rights before credits is a proposed condition of the Proposal and also part of the ASR operations plan (Transcript, Vol. I, p. 281, lines 8-14). He also testified that from a cost perspective, the City is incentivized to

use its native rights before taking the more expensive credits (Transcript, Vol. I, p. 264, lines 6-13). Lane Letourneau testified that the notion of a condition requiring the City to completely exhaust its aggregate 40,000 AF of native rights before accessing any credits would not allow sufficient flexibility (Transcript, Vol. VII, p. 1884, lines 8-25) but on a well-to-well basis a condition to use native rights first could be workable (Transcript, Vol. VII, p. 1883, lines 4-16).

In paragraph 98, the Hearing Officer's statement that "Letourneau stated that, in his 28 years of looking at applications and permits and applying statutes and regulations to them, he has never seen approval of two types of uses for the same quantity of water at the same time; he testified that it cannot be done" is unsupported by the referenced transcript. In fact, it is unsupported by the entire record of Mr. Letourneau's testimony, as the Transcript reflects he never made any such a statement (Transcript, Vol. V, p. 1230 through Vol. VIII, p. 2001).

In paragraphs 100-102, the Hearing Officer references some of Lane Letourneau's testimony relative to safe yield. However, the Hearing Officer omits Mr. Letourneau's testimony that recharge credits are not subject to safe yield analysis, and if AMCs are allowed as recharge credits, they will not be subject to safe yield analysis (Transcript, Vol. VI, p. 1500, lines 8-12; p. 1510, lines 19-25). She also omits Mr. Letourneau's testimony that an AMC cannot have any greater impact on safe yield than a physical recharge credit generated by withdrawing water and then replacing that water (Transcript, Vol. VII, p. 1875, line 7 through p. 1876, line 1). The reasons for these omissions are not explained in the recommendations.

In paragraph 106, the Hearing Officer omits that Mr. Letourneau also testified that if the City wants physical recharge credits under existing permit conditions, it will have to pump down the aquifer to accomplish that (Transcript, Vol. VII., p. 1901, lines 11-18). The Hearing Officer has already recognized that the only current usefulness of ASR to the City is in its capacity to generate credits (Finding 46).

In paragraph 107, the Hearing Officer fails to note that, given the sole utility of ASR as a credit generator and inability to generate physical credits without pumping down the aquifer, it would be manifestly poor stewardship of City assets to continue to pay the costs of maintaining and operating ASR without pumping down the aquifer to enable creation and retention of credits.

In paragraph 108, the Hearing Officer again fails to understand, and accordingly, materially misstates, Romero's modeling and the referenced testimony. Romero never specifically modeled the impacts of drawing the aquifer down to 1998 levels, but conducted his modeling starting from 1998 water levels, just as Burns & McDonnell did (Transcript, Vol. IX, p. 2497, line 22 through p. 2498, line 4). His modeling (as graphically presented in his Figure 7) showed that, if the City pumped 40,000 AF of native rights for 8 years, starting from 1998 levels, 29 wells would be impacted (District Exhibit 68, Figure 7). The Balleau Groundwater report does not break out which wells will be impacted when during the 8 years (District Exhibit 68). Romero's testimony referenced by the Hearing Officer in Finding paragraph 108 is recognizing that there is *potential* those 29 well owners may be impacted at the very start, because the aquifer has been drawn down to the 1998 levels (Transcript, Vol. X, p. 2601, line 24, through p. 2602, line 9). His modeling predicts that at the end of the 8 years, starting from 1998 levels, all 29 wells will be impacted (District's Exhibit 68, Figure 7). It is important to recognize and understand (as the Hearing Officer does not) that what is being modeled here is **not an impact of the Proposal**, but an impact of the City taking the actions needed to generate physical recharge credits under the terms and conditions of the existing permits.

In paragraph 28, the Hearing Officer references Romero's general testimony that maintaining high water levels slows chloride migration. However, the Hearing Officer omits all the testimony of George Austin on the question of how impacts of short term declines in a drought would compare with impacts of a long period of years with the aquifer drawn down to

1998 levels. Specifically, the Hearing Officer omitted Mr. Austin's testimony recognizing that if the chloride migration rate for 1998 was consistent with the annual average migration rate for the 1995-2005 time period in which 1998 was included, chloride migration resulting from drawing water levels down to 1998 levels for a period of twenty years would be about 264 feet per year, or a mile of chloride migration (Vol. XII, p. 3159, line 22 through p. 3160, line 6).

In paragraphs 110-114, the Hearing Officer cites testimony of several witnesses as to their experiences with the "concept" of "functional equivalent." The Hearing Officer fails to ever contemplate or understand that this is not some new doctrine or implied common law power, but a simple reference to recognition of substance over form, which courts and agencies alike very commonly engage in. It applies in this case to the AMC facet of the proposal, which is simply letting the City skip the step of taking water and then replacing it, by allowing the City to use the replacement water directly so as to leave in storage the water it would otherwise have taken.

In paragraph 114, the Hearing Officer makes the erroneous assumption (previously noted in relating to Finding 33) that the authorized annual credit withdrawal for File No. 47,400 was somehow forfeited because it was not included in the list of permits for which modification is sought. There is no basis for this assumption, and, as the Hearing Officer has already acknowledged, the aggregate annual limit on physical credit withdrawals for the ASR Phase II wells under the existing permits is, in fact, 19,000 AF (Finding 25).

In paragraph 120, the accounts of the various witnesses reflect that some of them did not understand how the proposed 120,000 AF cap was derived. When in doubt, one could refer to the Proposal, which states, in writing: "The estimated aquifer storage volume in the CWSA during initial implementation of the ILWSP by the City and during the conceptual development of the ASR program is estimated at 120,000 AF (see Attachment H, page 13) therefore the combined total quantity of AMCs and physical recharge credits cannot exceed 120,000 AF. The

proposed 120,000 AF limit on the combined total quantity of AMCs and physical recharge credits represents an estimated 11.7% of total available aquifer storage within the CWSA” (Proposal, City Exhibit 1, p. 3-6, paragraph 4).

In paragraph 121, the Hearing Officer omits the more important conclusion of Romero’s modeling, which is that even with the revised lower limits the maximum credits the City would be able to pump would be an aggregate 94,400 AF in credits (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158). That is, the 120,000 AF “withdrawal” posited by people who do not understand that the 120,000 AF **is only a proposed new cap on accruals** is impossible. **Impossible**, and that is coming from the District’s and Intervenors’ own expert, Dave Romero (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158).

In paragraph 133, the Hearing Officer again omits recognition that the Chief Engineer is the determining authority on spacing waivers (Transcript, Vol. VII, p. 1840, line 15, through p. 1842, line 2).

In paragraph 134, the Hearing Officer once again omits that none of the well owners who received the spacing waiver requests (District Exhibit 57) have intervened or even commented in this case. Tim Boese and the District board tainted by conflict of interest have no standing to raise the rights of well owners, *jus tertii*, where the well owners themselves have declined to raise any issue. The Hearing Officer does not even pretend to identify any rule or source of law that would allow this.

In paragraph 137, in addition to failing to recognize the fatal lack of standing to raise a claim not raised by any of the well owners who would have a right to raise it, the Hearing Officer failed to recognize that the gratuitous and unsolicited, personal recommendations of Tim Boese are not authoritative as to whether the Chief Engineer should require new spacing waivers. The Hearing

Officer inexplicably omits that Lane Letourneau testified the proposed permit conditions would protect domestic well owners, including the well owners who signed spacing waivers, from issues with quality or quantity of water, such that any spacing that still applies should be waived (Transcript, Vol. VII, p.1842, line 3, through p. 1843, line 4).

In paragraph 138, the Hearing Officer omits that the Proposal is not seeking to modify any of the conditions of the ASR Phase I permits, including the existing lower index levels for the ASR Phase I wells. The Hearing Officer also omits language from the letter that came after the language selectively cited, where Mr. Jacobs continued, “However, it should be noted that water levels in the barrier area can experience significant declines during dry or drought periods, even without the removal of recharge credited from ASR Phase 1 wells (City Exhibit 19, p. 4).). Mr. Jacobs also went on to note that when the Phase II permits were issued, the limitation related to the lower index levels was basically just duplicated in those permits (City Exhibit 19, p. 4). He then pointed out that the 2011-2012 drought and the increased irrigation use during that event had raised the prospect that water levels would be reduced below the 1993 levels by the conduct of other users even though the City was using only a part of its allocation in the area (City Exhibit 19, p. 4). Mr. Jacobs then went on to state:

The recent water level changes demonstrate that it is appropriate to make modifications to the administration of the City’s ASR project. It is now apparent that increased water use from irrigation users during drought conditions can cause significant declines in water levels not considered when the ASR appropriations were granted, and that the City should be in a position to recover available recharge credits even when water levels are below the 1993 index water levels (City Exhibit 19, p. 4).

In paragraph 141, the Hearing Officer omits all information on the extent of likely chloride migration. She also omitted all consideration of the comparative extent of chloride issues that could result from reducing the aquifer to 1998 levels. Mr. George Austin recognized in his testimony that if the aquifer were pumped back down to pre-1992 water levels, and hence, to higher rates of chloride migration, but remained there for a period of only a year or two, one could expect

perhaps a few hundred feet of chloride migration as a result (Vol. XII, p. 3158, lines 1-14). He also recognized that if the chloride migration rate for 1998 was consistent with the annual average migration rate for the 1995-2005 time period in which 1998 was included, chloride migration resulting from drawing water levels down to 1998 levels for a period of twenty years would be about 264 feet per year, or a mile of chloride migration (Vol. XII, p. 3159, line 22 through p. 3160, line 6).

In paragraph 144, the Hearing Officer again fails to acknowledge Mr. Pajor's testimony that the City was amenable to a condition restricting use of credits to defined drought events (Transcript, Vol. II, p. 310, line 20 through p. 311, line 14).

In Finding paragraph 145, the Hearing Officer omits that the reason for the low historic retention number is due to rising water levels in the basin storage area and reliance on a recharge basin that leaks 60% of injected water almost as soon as it is injected (Transcript, Vol. V, p. 1180, line 24 through p. 1181, line 4).

In paragraph 147, the Hearing Officer again omits that Mr. Pajor testified use of base rights before credits is a proposed condition of the Proposal and also part of the ASR operations plan (Transcript, Vol. I, p. 281, lines 8-14).

In paragraph 150, the Hearing Officer misinterprets the testimony and erroneously refers to "the practical saturated thickness of four index cells as revealed by the driller's logs." The lithography shown by a driller's log is that of the wellsite where the log was generated and cannot rationally be taken as establishing the lithography for the entire index cell where the well is located. The witness did not say that the well logs established practical saturated thickness for the four index cells (Transcript, Vol. VI, pp. 1588-1589).

In paragraph 177, the Hearing Officer misinterprets the limitation on simulating drawdown at a single well, and omits to state that Romero essentially ran the same model Burns and McDonnell

did, but with the addition of information on the depth of individual wells in each grid square (Vol. X, p. 2583, line 3, through p. 2585, line 25). Romero explained exactly what was wrong with the interpretation taken by the Hearing Officer in this proposed Finding, and why it in fact didn't preclude him from using the model to assess impacts on individual wells (Transcript, Vol. X, pp. 2582-2585). This proposed Finding is a further indication that the Hearing Officer failed to understand key evidence relating to the modeling in the case.

In paragraph 180, the Hearing Officer neglects to note that Balleau Groundwater did evaluate impacts on individual wells by running the model with the addition of information on the depth of individual wells in each grid square (Vol. X, p. 2583, line 3, through p. 2585, line 25). The Hearing Officer fails to explain why it should pose a problem that Burns & McDonnell did not, given the Balleau Groundwater modeling results. There is no reason to suppose that if Burns & McDonnell had modeled individual well impacts their findings would be different from Balleau Groundwater's findings.

In paragraph 182, the Hearing Officer dismisses testimony that recalibration of the USGS model was not needed because using the model to identify proposed new lower minimum index levels was sufficiently similar to the ASR accounting purposes for which it had been used. The stated basis for this was "There was no evidence offered to substantiate the alleged similarity between the apparently distinct purposes." The testimony was evidence, and the Hearing Officer cites no evidence to the contrary. The USGS Model was sometimes also referred to by witnesses as the MODFLOW model (Transcript, Vol. III, p. 655, lines 16-18). Again, it is the same model Romero used, and the Hearing Officer never questioned Mr. Romero's work due to concerns about the calibration of the model. The Hearing Officer completely fails to explain how the model could be inadequately calibrated for Burns & McDonnell but adequately calibrated for Dave Romero and Balleau Groundwater.

In paragraph 184, the Hearing Officer cites testimony from Masih Ahkbari that the model was incapable of predicting water levels at individual wells. Not only in this paragraph, but throughout the entire 184 pages of her recommendations, the Hearing Officer omits from discussion all mention of what Dave Romero had to say about Dr. Ahkbari's testimony. The disagreement as to the limitation discussed in Finding 177 has already been covered. Mr. Romero further testified that the model was adequately calibrated and he did not recalibrate the model (Transcript, Vol. X, p. 2587, lines 8-12). He did not do any well-by-well calibration of the type Ahkbari claimed to be necessary (Transcript, Vol. X, p. 2587, lines 13-20). Because, in his professional opinion, he did not think it was necessary for the analysis that he did (Transcript, Vol. X, p. 2587, line 21 through p. 2588, line 1). Mr. Romero also testified that contrary to Ahkbari's representations about the model being only "regionally" calibrated, there are well-specific calibrations that are part of the USGS model (Transcript, Vol. X, p. 2588, lines 2-17).

In paragraph 185, the Hearing Officer cites George Austin "echoing the concerns of Ahkbari" on the purported calibrations issues. Here, too, the Hearing Officer leaves out all mention of Romero's testimony that refuted Ahkbari's claims. Further, in this paragraph the Hearing Officer once again fails to address how there can be some calibration issue with the model when used by the City's consultant but not when used by the District's and Intervenors' consultant.

In paragraph 186, the Hearing Officer notes that Ahkbari compared actual groundwater level data from 2001 with the model's simulation for 1998 water level data. It is a total apples-and-oranges comparison, and so it is unsurprising that he found differences between simulated 1998 levels and actual 2001 levels. It was irrational for Ahkbari to treat the differences as "error," because 2001 observed levels are not determinative of 1998 levels. Further, like the Hearing Officer, Ahkbari did not understand what Burns & McDonnell was modeling. He admits in his expert report (p. 10) that he does not understand why 1998 water levels were used for the starting heads.

In paragraphs 187 and 188, the Hearing Officer again omits to mention Dave Romero's testimony disagreeing with both Akhbari's calibration arguments and Akhbari's contention that the model cannot be used to set groundwater elevations at individual wells. Further, the Hearing Officer consistently fails to acknowledge that all of Ahkbari's arguments are attacks on Balleau Grounwater's modling the same as Burns 7 McDonnell's modeling, sincethe same USGS MODFLOW model was used by both.

In paragraph 189-195, the Hearing Officer fails to note that the import of simulated results underestimating water levels is that both Burns & McDonnell and Balleau Groundwater would have over-projected the impacts of the 1% drought. It is unclear whether Ahkbari understood the drought in question is being modeled omn the premise that it occurs @ 2060, as this necessarily means it can only be projected based on "simulated" rather than "observed" data. Once again in all these paragraphs, the Hearing Officer omits to mention that his arguments as to calibration issues and limitations of the model were refuted by Dave Romero.

In paragraph 204, the Hearing Officer neglects to note that in each instance where he addressed what he thought was happening with the demand projections from MODSIM DSS, Mr. Clement noted that he did not do that work and there were some elements of speculation in his answers. In the testimony as to historical data from 1993 to 1940, for example, Mr. Clement indicated he thought that was right but that Mr. Winchester would be a better person to ask (Transcript, Vol. IV, p. 1021). The testimony in Transcript, Vol. III, p. 711 relates to different and more complex data that had to be compiled for the MODFLOW model, and the Hearing Officer is confusing what was happening with the inputs for the two different models.

In paragraph 205, the Hearing Officer seems to be contradicting Finding 166, in which she specifically recognized that two years of recovery were modeled (Finding 166).

In paragraph 210, the Hearing Officer omits that Burns & McDonnell initially wanted to use 5-foot contingencies, but Tim Boese expressed concerns that a larger contingency was necessary

and that led to the use of the 10-foot contingencies with which he now takes issue (Transcript, Vol. V, pp. 1159-1160).

In paragraph 212, the testimony cited from Romero would justify the contingencies that are less than 20% and would support reducing those that are over to the 20% tolerances he would support. Certainly this is an adjustment that could be made without rejecting the proposed lower levels *en todo*, and the adjusted levels should result in lesser modeled impacts than those projected with the original contingencies. The Hearing Officer's reference to the testimony about establishing the contingencies in a "plus or minus" manner does not make sense here, where the index levels set an absolute lower limit below which credits cannot be recovered.

In paragraph 222, the Hearing Officer thought the inputs for the model was confusing and inconsistent. The confusion was likely again due to the absence of any technical assistance to help understand the modeling. The testimony referenced in the subparagraphs does not appear inconsistent. The testimony introduced in generality what sort of things were included in the groundwater model, and then went into more explicit detail. In subparagraph d., the "later testified" is incorrect as Mr. Clement discussed the application of net irrigation at Transcript, p. 718, prior to the testimony referenced in subparagraph c., at Transcript, p. 727. Note that when he referred to modification of DWR reported water use at Transcript, p. 718, he stated, "The only exception to that irrigation, it is modified slightly based on the type of irrigation system. All of that was done in accordance with the USGS model documentation," the reference being to the model documentation on page 44 of SIR2013-5042.

In paragraphs 226 and 227, the Hearing Officer omits to note that while the Burns & McDonnell modeling did not take into account practical saturated thickness for individual wells, the Balleau Groundwater modeling was conducted with information on individual well characteristics (Transcript, Vol. X, p. 2583, line 3, through p. 2585, line 25).

In paragraph 230, the statement would be true for a site where there is or was a logged well, but for a site where there has never been a logged well, practical saturated thickness obviously cannot be directly determined by a well log. The Hearing Officer omits to mention that The District first sprung this issue of “practical saturated thickness” at hearing, during the cross-examination of Daniel Clement (Vol. IV, p. 985, lines 2-3), after all deadlines for experts and expert reports had passed (February 15, 2019 Order Extending Deadline for Expert Reports). As a consequence, neither the City nor DWR had any opportunity to direct discovery requests to the issue or obtain an expert assessment of lithographic conditions at individual well sites.

In paragraphs 246 and 247, it is not clear if the Hearing Officer understood that the reason for using the 95% retention levels was to simulate the retention levels that would exist if the aquifer were drawn down to 1998 levels, to avoid penalizing the City for not drawing the aquifer down to 1998 levels to achieve that actual retention.

In paragraph 250, George Austin did testify to this, but the reason for not showing leakage based on actual physical conditions in the AMC accounting proposal is to avoid penalizing the City for leaving the aquifer levels high (Transcript, Vol. V, pp. 1186-1187).

In paragraph 256, the Hearing Officer omits that DWR obviously does not agree with Mr. Boese about the applicability of safe yield in this case, as evidenced by Mr. Letourneau’s testimony that recharge credits are not subject to safe yield analysis, and if AMCs are allowed as recharge credits, they will not be subject to safe yield analysis (Transcript, Vol. VI, p. 1500, lines 8-12; p. 1510, lines 19-25). She also omits Mr. Letourneau’s testimony that an AMC cannot have any greater impact on safe yield than a physical recharge credit generated by withdrawing water and then replacing that water (Transcript, Vol. VII, p. 1875, line 7 through p. 1876, line 1). The reasons for these omissions are not explained in the recommendations.

In paragraph 257, the Hearing Officer omits mention of the District's serious conflict of interest issues, and also omits mention of the District's lack of any water rights of its own, which necessarily means it has no claim of cognizable injury to support a claim of standing in this case.

In paragraph 269, the Hearing Officer again includes the erroneous 18,000 AF figure, which is based on the irrational assumption that withdrawal authority for physical recharge credits was forfeited for File No. 47,400 because it was not included on the list of permits for which modification is sought. This is wrong and unsupported, and Findings 24 and 25 recognize that the total annual physical credit withdrawal authority for all 31 ASR Phase II permits is 19,000 AF.

In paragraph 271, this is indeed a claim made by Boese, but it is erroneous. The Hearing Officer omits that the rate of accrual of all recharge credits could not exceed the constructed physical diversion capacity of the ASR system including direct surface water diversions and future bank storage wells, and would be limited to the rate and quantity authorized by Water Right No. 46627 (Proposal, City Exhibit 1, p. 3-6, Section 3.4, proposed condition 2). All credits, including AMCs, would continue to be subject to the existing annual limits on withdrawal (Vol. VII, p. 1663, lines 3-6).

In paragraph 272, the Hearing Officer fails to note that this premise based on the testimony of Mr. Boese contradicts the Hearing Officer's later position that the AMCs would be back-dated and potentially compete with senior rights (Recommendations, p. 135).

In paragraph 275, this is Romero's legal conclusion that there would be a new diversion of water. The Hearing Officer omits that Lane Letourneau testified the City is not asking for any new water the City of Wichita (the "City") is not asking for any new water (Transcript, Vol. VII, p. 1752, lines 23-25).

In paragraph 280, the referenced testimony of Mr. Pope fails to explain how the impact of the AMCs would differ from that of the physical credits the City could accrues under the

existing permits by drawing the aquifer down to 1998 levels to accommodate physical recharge and retention.

In paragraph 289, the last sentence is simply the Hearing Officer's characterization. The fact is that the permits were each subject to a specific numerical elevation representing the minimum index level for the related well site, and some of those specific numerical elevations were changed.

In paragraph 290, Boese is testifying to his legal argument, but it has no relevance, as the Chief Engineer is free to follow his own view of the law, not what Mr. Boese claims the law to be.

In paragraph 298, the Hearing Officer omits that Mr. Letourneau also testified the Proposal was in the public interest (Transcript, Vol. VII, p. 1674).

In paragraph 300, the Hearing Officer omits all reference to the value of AMCs in avoiding the impacts shown by the Balleau Groundwater modeling. This is likely because the Hearing Officer does not understand that the modeling is showing impacts on 29 wells, from use of the City's native rights alone, if the aquifer goes into a 1% drought with 1998 water levels. Here also, the Hearing Officer fails to associate Romero's testimony from Finding 109 that constant high water levels are better than cycling up and down when trying to protect against chloride migration. The paragraph also omits reference to Lane Letourneau's similar testimony that AMCs provide a public benefit in the sense that water can settle out when left *in situ* as opposed to churning it by pumping a hole and recharging (Transcript, Vol. VII, p. 1881, lines 2-10).

In paragraph 307, regarding protections for non-domestic wells, the Hearing Officer omits that the six (6) wells identified by Romero as impacted by pumping to the proposed new

lower limits are all domestic wells, and all but one of them appears to be within the 660-foot radius protected by proposal conditions. (District Exhibit 68, p. 12 of 16, lines 353-354, and Figure 7).

In paragraph 312, the Hearing Officer omits the critical information that the Balleau Groundwater modeling shows this 120,000 withdrawal to be impossible, because even with the revised lower limits, the maximum credits the City would be able to pump would be an aggregate 94,400 AF in credits (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158). Unless it is due to the Hearing Officer's fundamental failures to understand the modeling, the omission of this evidence is inexplicable. The Finding as framed is irrational, and adopting it would be an abuse of discretion.

In paragraph 313, the Hearing Officer omits that Mr. Boese also testified the period of the USGS study was nineteen years, and so, much longer than the modeled eight-year drought (Transcript, Vol. IX, p. 2346). The Hearing Officer also omits that Mr. Boese calculated the average annual quantities pumped in the double pumping scenario as 52,064 AF and the average annual quantities pumped in the modeled eight-year drought as 45,481 AF, or about 6,500 to 6,600 AF less than in the double pumping scenario (Transcript, Vol. IX, p. 2347-2348). The Hearing Officer further omits that Mr. Boese stated the migration impacts as shown by the double pumping scenario for the area along the river was a 150-foot per year increase in level 1, 90-foot per year increase in level 2, and 80-foot per year increase in level 3, and the impacts for the Burrton plume were a 50-foot per year decrease in level 1, 60-foot per year increase in level 2 and 130-foot per year increase in level 3 (Transcript, Vol. IX, p. 2350). The Hearing Officer still further omits that Mr. Boese confirmed that even with the double-pumping scenario with a higher annual average pumping volume than the City's eight-year drought, the USGS scenario would still produce chloride

migration numbers of only feet per year (Transcript, Vol. IX, pp. 2350-2351). The reasons for these omissions are unexplained in the Hearing Officer's recommendations.

In paragraph 314, the Hearing Officer omits any recognition that an additional import of the feet-per-year migration figures shown in the USGS double-pumping scenario establish that substantial temporary declines (as for a drought) will have an impact in hundreds of feet, while substantial long term declines (such as maintaining 1998 water levels to the year 2060 to accommodate physical recharge) will have a much greater impact. The Hearing Officer omits that George Austin testified to this point as well, recognizing that the impact of maintaining the 1998 levels for a long period of years could be worse (Vol. XII, p. 3158, lines 1-14; Vol. XII, p. 3159, line 22 through p. 3160, line 6).

In paragraphs 315 through 321 (actually throughout the entire discussion on water quality) the Hearing Officer never considers the import of the USGS per-year migration data for comparing short-term, drought-related declines to decades with the aquifer at 1998 water levels. The recommendations don't recognize the issue, and the supporting data has been systematically omitted from the proposed findings and discussion.

In paragraphs 320 through 323, the Hearing Officer tries to assign water quality impacts to AMCs by suggesting that Romero did some sort of modeling as to AMCs. What Romero's referenced testimony actually shows is that his modeling simply used "credits" without characterizing them as physical credits or AMCs. As he expressly stated, "Whether it's considered an ASR credit or an AMC, the effects would be the same." (Transcript, Vol. X, p. 2561). The Balleau Groundwater modeling included no modeling of any effects specific to AMCs (District Exhibit 68), and, although Romero did not focus on it (and the Hearing Officer did not understand it), by picking up the assumptions of the Burns & McDonnell modeling, including the 1998 starting heads which are tied to having lowered aquifer levels to create physical recharge credits, the

modeling incorporated the Burns & McDonnell assumption that the “credits” drawn in the modeled eight-year drought are physical recharge credits (See, Proposal, City Exhibit 1, p. 2-11, Section 2.4.2, “The starting groundwater elevations represent the lower anticipated groundwater elevation range considerate of ASR recharge capacity, reoccurrence of drought, and the aquifer management strategies currently available to the City”). The Hearing Officer’s attempts to assign unique aquifer impacts to AMCs stem from substantial failures to understand the modeling. The proposed Findings impacted by these misunderstanding are fundamentally erroneous, and adopting them would be an abuse of discretion.

In paragraph 329, the Hearing Officer once again fails to recognize that the Balleau Groundwater modeling results show the hypothetical 120,000 AF withdrawal of credits to be impossible, because even with the revised lower limits the maximum credits the City would be able to pump would be an aggregate 94,400 AF in credits (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158). Accordingly, the proposed Finding is irrational, and adopting it would be an abuse of discretion.

In paragraph 334, the same issue surfaces again. The Hearing Officer irrationally criticizes the City for not having modeled the impossible 120,000 withdrawal of credits. The Hearing Officer never explains the usefulness of modeling a scenario that is not only not contemplated to occur, but actually has been shown by another consultant’s modeling to be an impossible scenario (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158). The inclusion of these types of fundamental analytical errors in the Hearing Officer’s Recommendations highlight the urgent need for the Chief Engineer to assign experienced modeling staff to review the Recommendations and revise them as necessary to rationally align them with the modeling evidence in the record.

In paragraphs 335 through 361, relating to minimum desirable streamflow, the Hearing Officer recognizes (in paragraph 338) that it is not normal practice for DWR to conduct a MDS analysis when evaluating any application or permit, but nevertheless proposes to find that there would be adverse impacts on MDS by pumping to the proposed lower index levels (paragraphs 344, 345, 346, 351, 352, 353, 354, 357, 358, 359, and 361). The Hearing Officer omits reference to the 19,000 AF credit withdrawal limit that is part of existing permits (per Finding 25) and also omits that AMCs provide a public benefit related to minimum desirable streamflow, in that, because of the fuller aquifer, there will also be more water flowing out of the aquifer into the adjacent stream (Transcript, Vol. VII, p. 1986, lines 1-15).

In paragraph 348, the Hearing Officer omits that Romero's testimony shows there are no impacts on MDS that are unique to AMCs, as withdrawal of physical credits would have the same effect (Transcript, Vol. X, p. 2561). The Hearing Officer also omits that the rate of accrual of all recharge credits could not exceed the constructed physical diversion capacity of the ASR system including direct surface water diversions and future bank storage wells, and would be limited to the rate and quantity authorized by Water Right No. 46627 (Proposal, City Exhibit 1, p. 3-6, Section 3.4, proposed condition 2). The Hearing Officer again fails to understand that the assumption underlying the use of 1998 starting heads in both the Burns & McDonnell and Balleau Groundwater modeling is that only physical recharge credits are available under the permits.

In paragraph 353, the Hearing Officer again includes a Finding of impacts from the hypothetical 120,000 credit withdrawal over the eight-year drought, despite the Balleau Groundwater modeling results that show such a withdrawal is impossible (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158).

In paragraph 355, this modeled depletion of river levels is specifically based on the City's exercise of its native rights, and is not an impact of the Proposal.

In paragraph 356, the first sentence is again based on the City's exercise of native rights and is not an impact of the Proposal. The second sentence is based on existing ASR Phase II rights to pump up to 19,000 AF of physical recharge credits per year, down to the existing lower index levels, and is also not an impact of the Proposal. It does show that the precedent in prior approval of ASR permit rights is that permit approval is not precluded by possible impacts to minimum desirable streamflow.

In paragraph 357, if the Hearing Officer understood the limited effect identified with the lowering of the existing lower index levels, she would have realized the 120,000 AF credit withdrawal ubiquitously posited throughout the recommendations is impossible.

In paragraph 359, the Hearing Officer omits that Romero showed no scientific basis for his allocation of loss between two rivers.

In paragraph 361, the stated analysis is indeed what Romero did. All of his modeling dealt with the impacts of pumping to the lower index levels, rather than any analysis of unique impacts of AMCs (See District Exhibit 68).

Paragraph 362 relates to modeled well impacts rather than minimum desirable streamflow. The second clause of the first sentence reveals that the impact on 29 of the 35 wells is actually based on the exercise of the City's native rights, and therefore, not in fact tied to changing the lower index levels, as the City's native rights are not restricted by the lower index levels (Transcript, Vol. III, p. 539, lines 13-15). Accordingly, the impacts on these 29 wells are not impacts of the Proposal, and the Finding should be corrected to recognize that fact. The impacts on the other six wells would be impacts of the Proposal, modeled with the current contingencies. The Hearing Officer omits that all six wells are domestic wells (District Exhibit 68, Figure 7).

Paragraph 363 also relates to modeled well impacts rather than minimum desirable streamflow. The Hearing Officer omits that whether any of the 29 wells impacted by the City's

native rights are more than 660 feet from City wells is irrelevant, as those wells are modeled to be impacted by the City's exercise of its native rights, not any rights under its ASR permits (Transcript, Vol. X, p. 2532). The Hearing Officer further omits that of the six domestic wells modeled to be impacted by the Proposal, only one appears to be more than 660 feet from a City well (District Exhibit 68, Figure 7). It is unclear whether this well (or any of the six) would be impacted if contingencies were adjusted as Romero suggested elsewhere in his testimony (Transcript, Vol. X, p. 2460).

In paragraph 365, the willingness of DWR to submit revised recommendations if necessary has become absolutely critical to obtaining a decision of any quality in this case. It is urgently necessary for the Chief Engineer to involve modeling staff, both to rationally align the Findings with the modeling evidence of record, and to conduct or review any follow-up modeling that may be necessary to assess adjustments to the Proposal.

In paragraph 373, the reference to "practical saturated thickness of four index cells" and to "index cell 1, where the practical saturated thickness is 30 feet" again shows the Hearing Officer erroneously imputing the lithography of a monitoring well to the entire index cell in which it is located. It is clear from the actual testimony of the witness that the 30 foot practical saturated thickness was for one well log in index cell 1 (Transcript, Vol. VI, p. 1587, lines 22-25).

In paragraph 374, a similar error arises, where the Hearing Officer construes the practical saturated thickness shown by well logs for four individual monitoring wells as showing "the practical saturated thickness of four index cells."

In paragraphs 384 through 399, relating to chloride concerns of Richard Basore, the Hearing Officer again omits consideration of the comparative impact of 1998 water levels maintained to the year 2060 to accommodate physical recharge under the existing permits.

In paragraph 392, Basore describes his concern as the potential for the City's proposal to increase salt intrusion into the water on which he relies.

In paragraph 393, he acknowledges his irrigation wells are close to the river.

In paragraph 394, the Hearing Officer notes Mr. Basore's concern about the hypothetical 120,000 AF credit withdrawal, and once again omits that the Balleau Groundwater modeling shows that withdrawal to be impossible (Transcript, Vol. IX, p. 2504, line 19; District Exhibit 68, p. 5, line 150, through p. 6, line 158).

In paragraphs 395 and 398, Basore acknowledges that he has already experienced chloride impacts at his wells, and that they are located in index cells 32 and 35. The modeling done by USGS and also used by Romero in his report shows projected migration of chlorides but provides no basis for a conclusion that the migration will cause any increase in the concentration of the chlorides at sites where they are already present. Logically, given the proximity of Mr. Basore's wells to the river (which is the source of the USGS modeled chlorides at his location) the chloride concentrations at his well sites would be expected to vary with the chloride concentrations in the river, not with the future migration of the chlorides, as he is already inside the area of chloride intrusion linked to the river (See District Exhibit 68, Figure 8).

In paragraphs 400 through 412, relating to the chloride concerns of Josh Carmichael, the Hearing Officer again omits consideration of the comparative impact of 1998 water levels maintained to the year 2060 to accommodate physical recharge under the existing permits.

In paragraphs 400 and 401, Mr. Carmichael acknowledged that his domestic well is on the southern edge of index cell 32, and that according to Romero's analysis, his well is at risk from chloride movement. In fact, his location appears to be already within the zone of intrusion under the "existing pumping" scenario (District Exhibit 68, Figure 8). Again, as with Mr. Basore, this shows that as far as chloride migration is concerned, Mr. Carmichael is or will be in the zone of chloride intrusion from the river irrespective of the outcome of the Proposal. As with Mr. Basore, given the

proximity of Mr. Carmichael's wells to the river (which is the source of the USGS modeled chlorides at his location) once he is inside the area of chloride intrusion, the chloride concentrations at his well sites would be expected to vary with the chloride concentrations in the river, not with the additional migration of the chlorides to areas beyond his property (See District Exhibit 68, Figure 8).

In paragraph 411, the events Mr. Carmichael identifies as alarming are not impacts of the Proposal, but events that will be associated with reduction of the aquifer to 1998 levels to accommodate creation and retention of physical recharge credits under the existing permit terms.

In paragraphs 413 through 423, relating to the concerns of Bill Carp, it appears that Mr. Carp's concerns are primarily related to potential for losing access to water.

Paragraph 414 discloses that Mr. Carp has one well in the basin storage area and that it is located in index cell 31. The Hearing Officer omits that this well is in the shallow zone where Balleau Groundwater projected 1 or 2 foot of additional drawdown from pumping to the proposed lower index levels (District Exhibit 68, Figure 6, Scenario C). The well is not one of the six domestic wells projected to have possible capacity issues from pumping to the lower levels are in Index Cells 10, 16, 20, 27 and 28 (District Exhibit 68, Figure 7). The Hearing Officer also omits that the site appears to be on the edge of the zone of chloride intrusion for baseline pumping (District Exhibit 68, Figure 8) and Mr. Carp acknowledges that he already has existing salt issues with this well, which has a lined pivot system (Transcript, Vol. XIII, p. 3382). As with the Basore and Carmichael wells, there is no reason to think that further chloride migration will change chloride concentrations at Mr. Carp's well as that would logically vary now in accordance with the concentrations in the river that are the source of the modled intrusions. As with the Basore and Carmichael, the Hearing Officer omits any consideration of

impacts to Mr. Carp's well from 1998 water levels maintained to the year 2060 to accommodate creation and retention of physical recharge credits.

In paragraphs 421 through 423, the Hearing Officer omits that Mr. Carp believed the modeling done for the City's Proposal was modeling from a full aquifer to show the withdrawal of 120,000 AF of credits over eight years of drought, and for the most part, he has not read the Proposal (Transcript, Vol. XIII, p. 3430). What one could conclude from the record concerning Mr. Carp's situation is that his well does not have a water supply problem, that it does have an existing chloride problem, which will vary in the future according to chloride concentrations in the river, and that Mr. Carp's views as to the Proposal are not informed by the actual Proposal, but by incorrect information he has been given about its content and supporting modeling.

II. DISCUSSION AND CONCLUSIONS

A. Motion to Dismiss

A motion to dismiss is not fact dependent, and ideally, if one is going to be granted on a jurisdictional basis and then tested in court, that should occur before the parties have to spend years in hearings, piling up thousands of pages of exhibits and thousands of dollars of expenses.

The Hearing Officer's first contention is that the testimony of David Pope and Tim Boese establishes that the changes allowed under a formal K.S.A. 82a-708b change application are the only fundamental changes that can be made to an existing water right (Recommendations, pp. 122-123). First, witness opinion testimony does not determine issues of law, such as the meaning of statutes or regulations. Second, K.A.R. 5-7-5 tends to show the Hearing Officer is wrong, as it allows for reduction of authorized quantity, rate of diversion, place of use and point of diversion. The case of *Clawson v. State*, 49 Kan. App. 2d 789, 315 P.3d 896 (2013) recognizes the rate of diversion and authorized quantity of water rights as central to the water right, and so, changes in these features of a right are necessarily fundamental changes. Yet, K.A.R 5-7-5(f) specifically provides

that requests submitted and considered pursuant to K.A.R. 5-7-5 are not change applications pursuant to K.S.A. 82a-708b.

The Hearing Officer also disagrees with DWR (and, for what it is worth, with David Pope's testimony) as to whether the restrictions of K.A.R. 5-5-3 only apply "after a vested right has been determined or the time allotted in which to perfect the water right has expired." Mr. Pope testified, "Yes, I think that's a fair interpretation" (Transcript, Vol. X, 2752), but apparently he is only an expert on the law when he agrees with the Hearing Officer, and not when he does not.

The Hearing Officer then goes on a bit of a detour to try to explain how the prior appropriation doctrine makes K.A.R. 5-5-3 not say what it facially says (and what Mr. Pope determined "a fair interpretation"). But, by the next page (p. 125), the Hearing Officer has more analytical problems, because the City is not asking to change the maximum rate of diversion or the maximum annual authorized quantity (which, for ASR Phase II would be the 19,000 AF of credits recognized in Finding 25). The Hearing Officer then goes on to restate the contention that K.A.R. 5-3-3 does not allow increase in the annual quantity established in the permit (although the City is not asking to do that) without any additional citation to supporting legal authority (p. 125, last paragraph).

Beginning on page 126, the Hearing Officer begins an effort to equate "maximum annual quantity" with "more water than is authorized under the existing permits." The words just don't match. "Annual quantity" has a clear meaning. The lower index levels are not a limit on "annual quantity." The additional assertion that "AMCs would provide the possibility for the City to increase its water use beyond the limits of its current permits," in addition to be erroneous and unsupported by the record, also doesn't relate to any change in annual quantity. The record is

extraordinarily clear that credits of all types would remain fully subject to the existing annual limits on credit withdrawal (Transcript, Vol. VII, p. 1663, lines 3-6).

The Hearing Officer's statement (p. 127) that "under the AMC concept, the City would be able to earn more credits than they currently can earn under their ASR permits" is simply not true. The AMC concept is designed to allow the same credits the City could create and retain as physical recharge credits under the existing permits by drawing the aquifer down to 1998 levels and conducting physical recharge. The rate of accrual of all recharge credits could not exceed the constructed physical diversion capacity of the ASR system including direct surface water diversions and future bank storage wells, and will be limited to the rate and quantity authorized by Water Right No. 46627 (Proposal, City Exhibit 1, p. 3-6, Section 3.4, proposed condition 2). In any event, even if the Hearing Officer's erroneous statement were correct, the 19,000 AF limit on withdrawal controls "maximum annual quantity," no matter how many credits the City earns.

The second paragraph on page 127 repeats the Hearing Officer's erroneous belief (discussed in the recommended Findings, where the Hearing Officer made this assertion, but the referenced testimony did not support it) that AMCs are "for leaving previously-injected water in the aquifer." It is not the Proposal. It is just wrong. But even if the understanding were not completely erroneous, the assertion, "in this way, the City would be allowed to withdraw more water from the aquifer than currently authorized" does not logically follow. The 19,000 AF annual limits on credit withdrawal remain the operative limit on the annual ("annual," not "currently") authorized quantity.

Next page (128) the Hearing Officer attempts a similar argument with the proposed lower index levels, asserting they would allow "more groundwater than is currently authorized." The

“currently” is there again, where “annual” belongs, and the obvious answer is that yet again, the 19,000 AF limit, which is the “annual” limitation remains in full force and effect, unchanged.

On page 129 (first paragraph) there is brief recognition (fourth line) that the analytical focus must be on “the maximum authorized annual quantity.” By the end of the next paragraph, and indeed, through the first half of the next page, the Hearing Officer reverts to “maximum authorized quantity,” “authorized quantity,” “currently authorized” “current quantity limitation” and “more . . . than the current permits allow.” It is a desperate struggle to write the word “annual” out of the law, because the Hearing Officer sees that the AMCs and proposed lower index levels in fact have no effect on the “maximum authorized annual quantity” under the existing permits.

So at this point, the detour argument that was supposed to explain why K.A.R. 5-5-3 does not mean what it facially says has also collapsed, because it does not work without getting rid of the word “annual,” and the Hearing Officer cannot find a way to do that.

On page 131, first full paragraph, when there is no support for an assertion, use “clearly.” The Hearing Officer asserts that under the AMC concept, the source of water is the Little Arkansas River, and that “this source is clearly different than the groundwater recharge credits accumulated by injection and storage.” This does not ring true, as the water that becomes a credit accumulated by injection and storage also came from the Little Arkansas River. There was also testimony in the case, including from George Austin and Tim Boese, that the river is hydrologically linked to the aquifer, which is how water can be gained from and lost to the river.

On the next portion of the discussion, as to whether the *Clawson* case deprives the Chief Engineer of jurisdiction to modify permits (pp. 131-134), the City concurs with the Hearing Officer’s recommended conclusion that it does not.

As to whether the Proposal violates the prior appropriation doctrine (pp. 134-135), the Hearing Officer has forgotten a few of her own recommended Findings. First, Tim Boese testified that there have been very few appropriations approved since the implementation of safe yield, basically only some small use permits (Finding 42). Second, the Hearing Officer also found (again based on the expert testimony of Tim Boese) that AMCs would remain junior in priority to any rights existing as of the approval of the Proposal (Finding 272). The Hearing Officer's new assertion that the priority of the AMCs would be back-dated to the date of the ASR Phase II approval is contradicted by her own prior Finding. Accordingly, for purposes of internal consistency, the argument on page 135 must be regarded as contrary to fact and unsupported by the record.

With respect to the discussion of whether the proposal constitutes an uncompensated taking (pages 135-138), the City concurs with the recommended conclusion that it does not.

With respect to the discussion of the City's standing to advance the Proposal (pages 138-139), the City concurs with the recommended conclusion that it does have standing.

With respect to the recommended Motion to Dismiss conclusion (page 139), it is unsupported because the analysis put forward by the hearing Officer fails, for the reasons stated above. However, if the Chief Engineer finds, based on either the Hearing Officer's analysis or any other grounds, that there is no jurisdiction to consider the Proposal, the case should be resolved with that simple statement and no other Findings or conclusions. The reason for this would be that if there is no power to consider the Proposal, there is then no basis to adopt any Findings or Conclusions concerning its substance.

B. Further Discussion and Conclusions

1. Lower Minimum Index Levels/Consistency With Permit Conditions re MOU

The Hearing Officer is wrong as to this recommendation because her factual premises are wrong, as discussed in relation to the recommended Findings. Nothing in the MOU committed the City to not seek subsequent changes where other laws and regulations permit. In fact, the MOU was made expressly subject to all provisions of laws and regulations. The Chief Engineer has the power to waive well-spacing regulations. Although the Hearing Officer omitted mention of the DWR recommendation, DWR staff recommended that any persisting spacing concerns be waived. Most importantly, the spacing waiver issue is being gratuitously raised by the District, which owns none of the wells or water rights concerned. The District has no standing and no legal basis to complain about the spacing waivers given that the actual well owners (shown on District Exhibit 57) have not raised the issue by intervening or even submitting comments in this case.

2. Passive Recharge Consistency With Permit Conditions and Regulations

The Hearing Officer's analysis assumes that former Chief Engineer David Pope's opinion of "passive recharge credits" is conclusive and unalterable. This does not follow logically. Former Chief Engineer David Barfield approved the ASR Phase II permits with the concept of "passive recharge credits" included therein. He has an equal footing with David Pope to opine on what he meant by the term. David Barfield (as evidenced by letters introduced by DWR) did not believe the AMCs would be "passive recharge credits." Lane Letourneau, Paul McCormick and Dan Clement were also of the view that AMCs are not "passive recharge credits," for the reasons stated in their testimony. There is not a definition of "passive recharge credit" in statute or regulations, and the current Chief Engineer has equal footing with David Pope and David Barfield to decide what he believes it means and should mean.

3. City Burden to Demonstrate Satisfaction of Statutory Criteria

The Hearing Officer is extensively wrong in the conclusions offered under this heading, because of her substantial factual errors and fundamental failures to understand the modeling in the case (discussed in relation to various of the recommended Findings). Case burdens should not be

transmogrified into insurmountable requirements to prove the negative of even the most irrational speculative harms. For instance, applicants should not have to generate useless modeling of impossible 120,000 AF credit withdrawals to show what hypothetical but impossible impacts the impossible withdrawals would have. For the reasons previously discussed in its Proposed Findings and Conclusions, the City believes the Hearing Officer has misconstrued the case of *Garetson Bros. v American Warrior, Inc.*, and erroneously imported to the permit review and approval process a definition of “impairment” that was only intended by the court to be applied to claims of actual, current impairment. If disproving the *Garetson Bros.* concept of “impairment” is extended to become a requirement of permit approvals generally, few or no new appropriations will be approved in Kansas.

However, and regardless of how strictly the City’s burden is construed, the City respectfully submits that when the Chief Engineer has the modeling evidence reviewed by experienced modelers, it will establish that the City has met all its burdens as to AMCs, because (as previously referenced in discussion of the Findings and in the City’s Proposed Findings and Conclusions in this case): 1) AMCs in fact do not allow the City to accumulate more credits than it could by drawing the aquifer down to 1998 levels for physical recharge; 2) AMCs do not have any impacts that existing physical credits do not have, including any greater impacts on existing wells or on minimum desirable streamflow; 3) AMCs cannot affect safe yield any more than physical recharge credits can; 4) AMCs will be subject to the same withdrawal limits as physical credits; 5) AMCs will not be withdrawn from Phase I wells; 6) the stipulation in the ASR Phase II MOU that impairment is not expected if credits are not withdrawn below the 1993 levels is powerful evidence that if the lower index levels are not changed, AMCs cannot cause impairment; 7) the City is on record as being amenable to a condition to use credits only during reasonably defined drought periods; 8) the City is on record as being amenable to a condition to use its native rights first on a well-by-well basis; 9) although the Hearing Officer disputes it, the Proposal in fact calls for the City to inject water for physical credits

when there is capacity to do so; 10) AMCs have a positive impact on streamflow by helping to keep the aquifer full and 11) all the modeled adverse impacts projected for the Proposal resulted from modeling withdrawals down to the proposed lower index limits, not from AMCs. The Hearing Officer has avoided reaching these findings as to AMCs only by ignoring substantial quantities of key evidence, misconstruing modeling results and refusing to consider the components of the Proposal separately (although asked by both the City and DWR to do so).

Additionally, once the Chief Engineer has had an opportunity to have the modeling evidence reviewed by experienced modelers, there is a pretty good case that the City has also met, by a preponderance of the evidence, all burdens for approval of the proposed lower index levels and AMCs together, because even with the Romero modeling, which projects pumping all the way to the proposed lower index levels: 1) the modeling results only identified six (6) wells that will be impacted by the new lower levels; 2) they are all domestic wells and it is unlikely that they fully penetrate the aquifer; 3) all but one of them appear to be within the 660-foot radius of the protective provisions of the Proposal; 4) testimony and evidence on chloride migration suggest the infrequent and temporary impact of the Proposal during protracted droughts will be less than drawing the aquifer down to 1998 levels for a long period of decades to facilitate physical recharge; 5) there should be a similar tradeoff as to impact on minimum desirable streamflow, which would be adversely impacted by the Proposal only during protracted drought events and would benefit from higher water levels the rest of the time; 6) minimum desirable streamflow should be improved by relieving the pressure on the City to pump credits in the early years of a drought due to the risk they could become stranded; 7) the Hearing Officer's interpretation of minimum desirable streamflow requirements in the permit review and approval process seems out of place and abnormal in the context of DWR's normal practices to administer MDS on a real time basis, and normally, for longstanding problems rather than temporary drought impacts.

As to points that the Chief Engineer might find to merit further study, the City reiterates its position that it would be appropriate to reopen the record as necessary to address any such issue. Particularly this would be so as to matters such as practical saturated thickness, which were first raised at a time when the hearing process and expert deadlines precluded new studies, and DWR modeling staff were walled off from the staff participating in the hearing process. Further, given that the Hearing Officer's Recommendations selectively omit numerous matters and do not provide a balanced sense of the parties' evidence and arguments, the City suggests that the Chief Engineer should also directly review the Proposed Findings and Conclusions, Post-Hearing Briefs and Replies of all parties, in order to gain a more adequate sense of what the recommendations left out.

Respectfully submitted,

Office of the City Attorney
of the City of Wichita, Kansas

By /s/ Brian K. McLeod
Brian K. McLeod, SC # 14026

CERTIFICATE OF FILING AND SERVICE

The undersigned hereby certifies that he transmitted the above and foregoing City's Comments on the Hearing Officer's Recommendations by electronic mail on this 11th day of February, 2022, for filing, to ronda.hutton@ks.gov and served the same upon counsel for the other parties herein by electronic mail addressed to:

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