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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.

EQUUS BEDS GROUNDWATER MANAGEMENT DISTRICT NUMBER 2 RESPONSE TO CITY OF WICHITA, KANSAS BRIEF

COMES NOW Equus Beds Groundwater Management District Number 2 (hereinafter "the District"), by and through counsel Thomas A. Adrian of Adrian & Pankratz, P.A., and David Stucky, with its Response to the City of Wichita, Kansas' ("City") Brief, as follows:

I. Common Ground with City

The City takes a more balanced and fair approach to its analysis than with DWR. Thus, there are many aspects of the City's Findings that are uncontested by the District. For example, the District doesn't refute: p. 1, fact 3; p. 2, facts 7, 8, 13, 14; p. 4, facts 22, 23, 25-27; p. 5, facts 32-35; p. 8, facts 54-58; p. 12, facts 17, 18; p. 14, facts 1, 2; pp. 18-20, facts 29-47.)

II. Overarching Factual Errors

Factual errors of the City are documented in detail in the District's prior Brief. However, just a few overarching misstatements from the City's Findings need to be quickly cleaned up for a clear record. First, like DWR, the City incorrectly contends that recharge credits can currently be withdrawn at a rate of 19,000 acre feet per year based on current ASR Phase II permits. (City's Findings, p. 3, fact 17; p. 24, fact 75.) Second, the City wrongly asserts that it has five

active native water rights in the Basin Storage Area (BSA), when, in reality, it can be readily verified that it only has three water rights. (*See id*. at p. 14, fact 2; City's Water Rights.)

III. Background on Proposal

a. General Background

A few points are particularly relevant as to the City's past accumulation of physical recharge credits and with respect to pumping native water rights. During the years 2013 (first year of ASR Phase II operation) to 2019, the City pumped an annual average of 16,728 acre feet of water pursuant to its native water rights in the BSA. (*See* 2013 – 2019 ASR Accounting Reports[1].) During this same period, the yearly average amount injected by the City into the Aquifer via ASR Phase I & Phase II was 1,571 acre feet per year, which translated to an average of 821 acre feet of artificial recharge credits. (*Id*.) The most water the City has ever injected into the Aquifer in any one year (2016) is 3,027 acre feet, which translated to 1,394 acre feet in recharge credits. (*Id*.) These numbers, established during the hearing and through documents that were subject to judicial notice, are relevant to the later discussion in this Response.

The City also contends that "credit withdrawal" under the Proposal will be subject to the "existing limits." (City's Findings, p. 2, fact 6.) It is unclear what is meant by this phrase. The District assumes it is meant to refer to the 18,000 acre feet per year withdrawal rate. However, any other implication of this phrase would simply be false, as the Proposal makes drastic fundamental changes to the City's prior permits, as established in this Response. For example, the City seeks to alter the Minimum Index Levels. This will undoubtedly change the "limits" under which the City can withdraw credits. The City could also expand the number of credits it could withdraw in the future. If the withdrawn applications for additional recharge credits

[1]The 2018 and 2019 reports are still in draft form.

withdrawals are re-filed, the City could withdraw credits much greater than 18,000 acre feet per year. In fact, the City indicated that it must re-file these applications to meet its projected drought modeling. (*See* District's Findings, pp. 21-22; Withdrawn Permits.)

b. The City's Historic Poor Planning

The City admits that its past modeling and projections with respect to the physical recharge credits failed to account for the possibility of an extended drought. The City contends, "Additionally, the City's identification of the importance of ASR recharge credits for drought mitigation purposes had not occurred as of the 2009 ASR Phase II approval, but resulted from studies initiated in and after 2014." (City's Findings, p. 7, fact 50.) It is frankly incredible that the City hadn't thought of the need to model these conditions prior to 2014. If the City's past studies failed to account for something as remarkable as a drought, it is hard to have much confidence in the City's modeling regarding the impacts of AMCs and lowering the Minimum Index Levels.

IV. Benefits Touted by City

All of the City's touted benefits will be predicated on the fact that it won't be forced to pump down the Aquifer to accumulate credits. Again, the City will not be forced to do anything and there is no guarantee the City won't still pump down the Aquifer. However, the reality is that the City has pumped down the Aquifer every year by using its native water rights. In recent years, when the City argues it has been a great steward of Aquifer management, the City has pumped from 2016 to 2019 an average of 21,406 acre feet per year in native water. (*See* 2013 – 2019 ASR Accounting Reports.) It merits noting that the City has accumulated during this same time frame on average only 593 acre feet of recharge credits per year, with the most being 1158.8 acre-feet in 2018. (*Id.*) In contrast, all other permitted users in the BSA only pumped an

average of 18,517 acre-feet per year from 2016-2019. (*Id*.) Thus, the City does not need to pump down the Aquifer currently, any more than it already has in the past. The argument that the City can pump from the river and keep the Aquifer full would be a great concept if the City could not also accumulate corresponding credits for this good management. As addressed later, the problem exists with allowing the City to accumulate phantom credits for water never injected into the Aquifer and then withdrawing native groundwater out of the Aquifer at a later date.

V. City's Recent and Threatened Poor Stewardship

In direct contrast to the DWR's contention to the contrary, the City admits that it has started to pump down the Aquifer to allow for physical recharge credits. (*Compare* DWR's Findings, p. 18, fact 27 *with* City's Findings, p. 18, fact 27.) Thus, the City has already commenced actions to prove its point and has threatened continued poor management in the future. However, as indicated above, the City has never generated more than 1158.8 acre-feet of physical recharge credits in a year while trying to pump the aquifer down. Likewise, the City has pumped, on average over the last 3 years, at least half of its native water rights. Thus, if AMCs and physical recharge credits are truly parallel, the City will never need to pump the Aquifer further down more than it already has been to support the accumulation of physical recharge credits. Any further pumping by the City to justify its threatened harms, would only be vindictive in nature. Thus, to add teeth to the City's promises, the District thus supports permit conditions featuring DWR's recent pumping and past accrual of recharge credits as a prerequisite to the accumulation of AMCs (if this harmful Proposal is approved).

VI. City's Modeling

The City doesn't really counter the District's concerns with the City's modeling.

VII. New Appropriation of Water

AMCs are a new appropriation of water. The District agrees with the following statement by the City: "Accordingly, in the modeled scenario, *water* diverted by withdrawing credits is *only present to begin with because the City injected it*." (City's Findings, p. 37, fact 52.) In contrast, AMCs don't fit within the City's modeling because they are a totally new species that appropriates new water. The Phase II Order requires the water to be "injected into the Equus Beds Aquifer." (Finding 5.) With AMCs, contrary to the prior permits, no water will be "injected. Thus, AMCs can only result in a new appropriation of Equus Beds groundwater.

VIII. Expanding Consumptive Use

As an extension of the fact that AMCs are a new appropriation of water, AMCs will expand the City's consumptive use. The City raises a very helpful point in support of the fact that Kansas law prohibits an applicant from increasing the consumptive use of a water right. The City identifies K.A.R. 5-7-5 that indicates that an applicant "may file, at any time, a request to reduce" attributes of a water right, such as the authorized annual quantity of water. (City's Findings, p. 13, finding 21 (*quoting* K.A.R. 5-7-5).) There is obviously no statute or regulation that allows an applicant to voluntarily increase the consumptive use of a water right. Applying the rule of construction of *expressio unius est exclusio alterius*, the fact that the legislature specifically addressed the reduction of a water right but declined to allow an applicant to expand a water right, indicates the legislative intent to preclude an applicant from unilaterally increasing the consumptive use.

In this situation, the District has argued repeatedly how the City's Proposal will expand the consumptive use. First, the District has maintained that the City will double its consumptive use with the development of AMCs. Again, for every gallon the City diverts from the river and

consumes for municipal purposes, it will obtain *another* gallon of water out of the Aquifer at a later time. It is simply impossible to understand how a mere change in accounting magically rectifies this very obvious fact. The City will also increase its consumptive use by lowering the Minimum Index Levels. As indicated, the City will expand the BSA by lowering the Minimum Index Levels, resulting in an additional 79,500 acre feet that can be withdrawn. (City's Findings, p. 36, fact 48.) This will obviously increase the City's capacity to withdraw recharge credits. This is yet another way the City's Proposal illegally seeks to expand the consumptive use.

Rather, without explanation, the City writes: "The City of Wichita's Proposal is not seeking a new appropriation of water." (City's Findings, p. 1, fact 1.) The District's contentions remain unanswered on expanding the consumptive use and the City has never discovered a credible argument for justifying this statement. Just because the City says it isn't so, that doesn't convert it to a fact. Likewise, Mr. Clement, the City expert cited for this proposition, never was designated as an expert to discuss this topic. (*See* Clement Expert Report.) Thus, for multiple reasons, this statement can simply be disregarded as argumentative and for offering a "fact" not supported by the record. The City's Proposal will expand the consumptive use, constitute a new appropriation of water, and undoubtedly should be denied for this reason.

IX. Passive Recharge Credits

As explained in the response to the DWR Brief, David Pope, as Chief Engineer who approved ASR Phase I, defined passive recharge credits as "water which the City could have legally pumped, but did not pump." (Phase I Order, p. 2, para. 10.) Mr. Pope in the same order later defined passive recharge credits as "credits for not pumping City wells in the basin storage area." (*Id*. at p. 9, para. 42.) The City defines AMCs as "water left in storage as a result of utilizing Little Arkansas River flows rather than groundwater." (City's Findings, p. 1, fact 4.)

The definition used by the City for AMCs is virtually identical to the definition of passive recharge credits. However, the City attempts to again resurrect a tenuous distinction: "Mr. Barfield 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)." (*Id*. at p. 16, fact 12.) As pointed out in the Response to DWR's Brief, this elementary distinction makes little difference. Why would the surface water from the Little Arkansas River passing through the ASR treatment infrastructure make it so special that it would be not be a passive recharge credit? It is impossible to understand how a gallon of water diverted from the Little Arkansas River is somehow different from the Arkansas River, or if the source is Cheney or El Dorado Reservoirs. The reality is that these distinctions may be the best that DWR/the City can contrive. It may even be the only distinctions. However, common sense dictates that these are lackluster attempts to distinguish AMCs from passive recharge credits at best. AMCs are passive recharge credits regardless of how you modify the accounting and regardless of what other source of water the City uses. DWR acknowledges that it prohibits passive recharge credits and stands by this policy. The idea advanced by the City and DWR that AMCs are just a mere change in the ASR accounting is nonsensical. AMCs are clearly prohibited passive recharge credits, and must be denied.

X. Water Level

The City devoted a considerable amount of time in its Brief to discussing water level. The District will address and refute, if necessary, each assertion made by the City. First, the City contends: "AMCs provide a public benefit because it is in the public interest to manage the aquifer full, and to have the aquifer full going into a 1% drought." (City's Findings, p. 25, fact 80.) The District acknowledges that at first blush it is better to have the Aquifer full heading into

a drought than depleted. However, the City's Proposal offers little to nothing to guarantee this will occur. The City's Proposal doesn't offer any permit condition mandating the City to operate in this fashion. Rather, the City only offers the assurance that future operators and leaders will maintain the Aquifer in that fashion. This statement provides little more credibility than an astute politician making campaign "promises" to ensure election.

In the City's case, it could pump the Aquifer hard all year long and then benefit from rainfall late in the year. As indicated, the entire year of AMC accumulation and recharge credit withdrawal is dictated by the January water levels. The City was masterful in pushing for this change knowing that little pumping of the Aquifer would occur in the months of October, November, December, and January, as most crops are dormant and don't require irrigation. Likewise, yards surrounding residences or landscaping for businesses don't need watering at that time. Thus, the City can benefit from the natural recharge of the Aquifer, as well as the fact that its ability to pump recharge credits or accumulate AMCs for the entire year is not conditioned on peak pumping periods. In fact, just the opposite. If the City's ability to pump recharge credits or accumulate AMCs was measured in July during a peak pumping period, the City's strategy would look much different and it would have much less ability to pump down the Aquifer. This January measurement gives the City incredible flexibility to manage the Aquifer and utilize Cheney in the winter months, while pumping hard out of the Aquifer the remainder of the year. The City undoubtedly can "game" the system and there is simply no guarantee the City will keep the water level full or pump less of its native credits.

The City next surmises, "No one will be benefited by the City taking credits early in a drought when it does not need them." (City's Findings, p. 34, fact 34.) However, the City never explains how it can guarantee that it will wait to withdraw credits. Again, this is not a permit

condition. Under the City's Proposal, the City could accumulate well over twice the amount of recharge credits it would need during a drought anyway. (*See* City's Exhibit 1.) Thus, there is no reason the City would be incentivized to ration its recharge credits. The same logic applies to the City's next statement: "Adjusting the lower index levels would help to keep the aquifer fuller by allowing the city to wait longer before it has to decide whether to draw credits in a drought, because the longer droughts occur less frequently." (City's Findings, p. 35, fact 38.) Again, the City has no reason to wait longer, especially if it can accumulate many times more credits than it actually needs in a one percent drought. Further, as the City's own witnesses testified to, it will be difficult for the City to know the nature of the drought as it is occurring. Moreover, the City never modeled how it is beneficial to "bank" credits for use later in a drought. In fact, as argued elsewhere, saving credits for the use at the end of a drought could have even more drastic impacts to water levels and water quality. Again, this benefit cited by the City is only temporary and the end result is that the Aquifer will be depleted at times when it is most vulnerable. The City never demonstrated how this later depletion is somehow more beneficial.

Like DWR, the City has completely ignored the District's very poignant contentions regarding practical saturated thickness. Rather, the City merely hypothesizes, "Comparing the difference between the existing and proposed elevations with the feet of the remaining saturated thickness gives an indication how much additional room there would be to extend a well." (City's Findings, p. 33, fact 24.) However, this logic was, for lack of a better term, dismantled by the testimony of Mr. Letourneau. Mr. Letourneau analyzed the practical saturated thickness in numerous cells germane to the City's well field. (*See* District's Findings, p. 44-50.) He indicated that the practical saturated thickness made it apparent that the viability for a well varied greatly from that indicated by the modeled saturated thickness. (*See id*.) For example, the City's

averages for saturated thickness included nonproductive clay layers and were not site specific. (*See id*.) Consequently, Mr. Letourneau indicated this caused him apprehension and that it may not be as simple as just drilling a new well. (*See id*.) Despite Mr. Letourneau's grave concerns, neither the City nor DWR have countered or even mentioned these points. Thus, the harms to the Aquifer were simply underestimated by the City and the potential for detrimental impacts is far greater. The City must address these points through future modeling, as recommended by Mr. Letourneau.

With the above in mind, the following points by the City simply hold no water:

> Mr. Clement was of the view that the data developed on remaining saturated thickness would enable the lowering of wells that may be impacted. Even for a domestic well in a situation with low practical saturated thickness, if we're talking about a yield even for stock watering or whatever the case may be, to get on the order of thirty gallons per minute, you can do that in lower yield environments with much more screen interval, you can get it in sands that are a little bit tighter, things of that nature.

(City's Findings, p. 40, facts 76, 77.) It is unclear really what is even meant by some of these statements or how they justify depletion of the Aquifer. Likewise, the District explained how merely lowering the impacted wells may not be a viable solution. Further, it accepts the premise that AMCs and the lowering of the minimum index levels have the potential to deplete the Aquifer. This underlying reality cannot be forgotten, and merely lowering wells does not rectify the harms to the Aquifer itself. Further, Mr. Clement never addressed these contentions in his expert report and the City offered no modeling or data on these points. Thus, they can be readily disregarded.

Finally, the City writes, "It is impossible for AMCs to cause any potential detrimental impacts that do not already exist as a result of the provisions for physical recharge credits under the existing permits, because the limitations on use of source water, rate of accrual and credit

withdrawal are the same for AMCs as for physical recharge credits." (*Id*. at p. 24, fact 74.) None of these distinctions reconcile how AMCs are similar to physical recharge credits. It is unclear what "limitations on use of source water" are being referred to in the first phrase. (*See id*.) The source water for artificial recharge credits is injected into the Aquifer. With AMCs, the source water is sent directly to the City for municipal use. The only similarity is that the Little Arkansas River must be flowing at a certain level to facilitate the diversion of the river water. However, this is wholly irrelevant to the distinction regarding how the source water is used. Likewise, the threshold for the river level to facilitate pumping has nothing to do with the water level in the Aquifer and is a meaningless comparison. The City next identifies "rate of accrual." (*See id*.) The rate of accrual of AMCs also has absolutely no bearing on the District's arguments. Regardless, the District has explained numerous times that the City would be able to accumulate AMCs faster than physical recharge credits. Thus, this comparison is actually not even true. However, even if it was an accurate statement, it is wholly immaterial.

The final analogy the City draws between AMCs and physical recharge credits is that "credit withdrawal is the same." (*See id*.) The District does not dispute that the City will be able to take water out of the Aquifer in the same fashion pursuant to both kinds of credits. However, this distinction also completely ignores the core of the District's arguments. The problem with AMCs is how they are accumulated. Unlike with physical recharge credits, no water is placed in the Aquifer. Consequently, the City is allowed to withdraw water it never placed in the Aquifer, stemming from credits accumulated when the City consumed river water for municipal purposes. Thus, when AMCs are withdrawn, there is the potential for drastic impacts to the Aquifer whereas physical recharge credits are mainly Aquifer neutral when withdrawn under the current Minimum Index Levels (1993) restrictions. Again, the City's three distinctions offer nothing to

explain how AMCs will actually impact water levels the same as physical recharge credits. The reality is that AMCs and physical recharge credits are almost nothing alike in the areas that actually matter, and AMCs withdrawal can result in significant drops in water level. Perhaps the City articulated the argument best for why withdrawing water accumulated from AMCs, and also why withdrawing recharge credits below the current Minimum Index Levels, would be harmful for the Aquifer: "Water that the City withdraws when it takes credits at levels above the 1993 lower index levels is gone from the aquifer and does not magically come back when water levels decline below the 1993 levels." (*Id*., p. 35, fact 36.) In applying this statement to the District's argument on AMCs, if the City takes water out of the Aquifer that it never added to the supply, the Aquifer will be permanently depleted of that water. Simply put, AMCs are a management tool that only benefit the City and will undermine the integrity of the Aquifer in the future.

XI. Safe Yield

The City only raises a few contentions regarding safe yield that must be addressed. Without any analysis supporting the bold proposition, the City contends, "An AMC cannot have any greater impact on safe yield than a physical recharge credit generated by withdrawing water and then *replacing* that water." (*Id*., p. 24, fact 72 (emphasis added).) The City takes it a step further, "With respect to the issue of whether water that could be withdrawn with AMC credits is already spoken for under existing appropriations, the AMCs would be no different than existing physical credits, which are not tied out to the inventory of water in the aquifer." (Id. at p. 24, fact 73.) These statements have been refuted on so many levels. It is clear that, unlike physical recharge credits, AMCs don't "replace" water. Rather, instead of replacing water, as water is diverted for municipal use, the City is allowed to subsequently *consume* more water. There is a

big difference between *replacing* water and *consuming* water. Thus, as argued by the District in its Brief, physical recharge credits are exempted from safe yield while AMCs are not.

Regarding the second statement of the City, Mr. Pajor testified that nobody should get credit for water not pumped. (*See* District's Findings, p. 15.) It is impossible to understand how the AMC water is not "spoken for", as AMCs strictly appropriate native groundwater. In contrast, with artificial recharge credits, the water may not be "tied out to the inventory of water in the aquifer" because the City actually directly injected it into the Aquifer. This constitutes a monumental distinction. It is very clear that safe yield applies to the City's Proposal. As testified to by Mr. Boese, the City's Proposal violates safe yield and thus must be denied. (*See id*. at p. 39.)

XII. Impairment

The District recognizes that many of its points regarding impairment also tie into its analysis on water levels. However, a few contentions of the City must be addressed separately in this section. First, the City does not refute that its Proposal has the potential to impair numerous wells. (*See* City's Findings, p. 21, facts 50-54.) In fact, no witness was offered by the City to counter the modeling on these points performed by Mr. Romero. Moreover, it merits pointing out that Mr. Romero only analyzed the limited well data readily available to him. Thus, the reality is that a far greater number of wells could be impacted. It is not the District's job to pay for this research or to conduct it. Thus, the City must perform far more detailed modeling on impairment.

XIII. Water Quality

The City now attempts to fashion some arguments on water quality. The City contends: "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." (*Id*., p. 24, fact 78.) It is unclear what exactly is meant by this phrase or the rationale. However, it appears that the City is *maybe* arguing that churning the Aquifer will somehow disturb sediments in lower portions of the Aquifer and somehow release contaminants into the water supply. However, DWR contends the City is only operating in the top 12 percent of the Aquifer. (DWR's Findings, fact 8.) If this is true, it is hard to understand how the City will "churn" the remaining 88 percent. However, regardless, neither the City nor DWR performed a second of modeling to substantiate this point. (*See* City's Exhibit 1.) It might be interesting for the Hearing Officer to order the City to model this concept so there can be some analysis of the potential benefits, if any. However, all that is conclusively understood at this juncture, through actual modeling, is the profound harmful effects to water quality when the City withdraws its AMC credits and also withdraws recharge credits below the current Minimum Index Levels. Indeed, even the City admits that Chlorides will move when Aquifer levels drop drastically. (City's Findings, p. 18, fact 28.)

The City now also makes some new arguments about how various members of the intervenors will be impacted by Chloride movement if the City pumps the Aquifer down to 1998 levels for 20 consecutive years. (*See* City's Findings, p. 19, facts 35, 36; p. 20, fact 44.) As a corollary, the City contends that area users will be benefited if it keeps the Aquifer full and these continued drawdowns do not occur. (*Id*. at p. 29, fact 20.) However, the City never produced any testimony that it would even single-handedly have the ability to pump enough to maintain the Aquifer at the 1998 levels. Furthermore, the City never produced any modeling or testimony on the prevalence of chloride movement when the water level is dropped to 1998 levels. In fact, the City never generated any modeling or testimony at all regarding how AMCs or lowering the water level would impact chloride movement. Again, it might be interesting for the City to

provide some analysis and modeling on this subject. At the juncture, any conclusions in this regard would be wild guesswork. Again, the only fact we know for sure is that withdrawing recharge credits, including AMCs and recharge credits—especially below the 1993 levels—would have vastly detrimental impacts on chloride movement and water quality.

Again, although the City has leveled some new arguments on water quality (that are easily addressed), it merits reminding the Hearing Officer that the City's witnesses never testified about water quality, never mentioned water quality in an expert report, and certainly didn't address water quality in the Proposal. Thus, any argument on this component by the City at this late juncture can be summarily ignored. Although the City was required to analyze this component pursuant to the various Hearing Orders, it failed to do so, and the District/Intervenors have provided the only credible evidence on this subject. In fact, to seal this point, the City even admits it did not perform any modeling on how its Proposal would impact chloride movement. The City writes: "The potential chloride impacts that might occur have not been specifically modeled." (*Id*., p. 42, fact 9.) The City's Proposal must be dismissed for lack of analysis on this crucial point.

XIV. MDS

The City now provides some contentions on minimum desirable streamflow ("MDS"), that can all be readily addressed or countered. The City's main principle it maintains is that the Proposal "would result in the aquifer being managed at higher levels." (*Id.*, p. 39, fact 65.) The City produced absolutely no historic analysis regarding the number of years the Aquifer would remain full or conceivably be managed at a higher level. In fact, the vast majority of recent years identified during the Hearing allowed for physical recharge. However, if the City is able to benefit from some particularly wet years, it will accumulate AMCs during that time. Although

we don't know how many years the City will be able to capitalize on greater rainfall and high river flows, the City could potentially accumulate a significant number of AMCs during those years. The problem is that the City will withdraw those accumulated AMCs potentially when the Aquifer is in its most vulnerable state: during a drought. Thus, the City's only argument on MDS ignores the impacts when AMCs are withdrawn and also when recharge credits are withdrawn below the 1993 water levels. Based on the City's own modeling, we know the Aquifer will be harmed over a number of years as the AMCs are used. In contrast, we don't have any projections regarding the number of years the City expects the Aquifer to have favorable conditions for the accumulation of AMCs. Thus, again, any arguments the City makes in this regard are unsubstantiated, and pale in comparison to the known impacts of withdrawing AMCs and pumping below the 1993 levels.

The City also now argues that neither DWR nor the District consider MDS up front when granting any application for approval of a water right. (*Id.*, p. 39, fact 67.) This argument is verifiably wrong on many levels. Based on the space allowed, just a few examples that disprove this proposition are included. For example, the District considers well spacing regulations that require all new wells to be located at least a quarter mile from certain rivers and streams, including the Little Arkansas River. (*See* K.A.R. 5-22-2.) This regulation undoubtedly is designed to curtail the impacts of pumping on MDS, by requiring wells to be set back from the river. All new water rights also have to be consistent with safe yield and this encompasses the direct connection between surface water (MDS) and groundwater. Indeed, baseflow river nodes have been established on the Little Arkansas River to account for groundwater losses to the Aquifer by assigning a groundwater allocation to the river nodes. These baseflow nodes are included in the District safe yield calculations. (*See* K.A.R. 5-22-7). By accounting for river

baseflow allocation in safe yield calculations, the baseflow, and therefore MDS, is protected via the District's Safe Yield Regulation, K.A.R. 5-22-7, by not over-appropriating the Aquifer with too much new development near the Little Arkansas River and other baseflow rivers in the District. Finally, the City's Bentley Reserve Field is located near the Arkansas River in Sedgwick County in the District. Four of the permitted wells are considered to be bank storage wells and can only operate when flows in the Arkansas River are above a certain level, much like the ASR Phase I and Phase II surface water and bank storage permits can only operate when the Little Arkansas River flow is above a certain level. (*See* City Bentley Reserve Well Field Water Permit Nos.45298-45301.) These conditions directly protect baseflow and MDS. In fact, the District, DWR, and the City spent a considerable amount of time reviewing and discussing what the minimum flow trigger on the Arkansas River should be to protect MDS (despite MDS not even being officially established on this stretch of the Arkansas River) when reviewing the Bentley Reserve Well Field applications. (*Id*). Apparently, both the City and DWR have forgotten about, or were unaware of, these examples when both claimed that MDS is not considered up front when reviewing water permit applications. Many more arguments could be made to counter this contention. However, the above examples should quickly establish the falsity of the claim.

The City next contends, "It would be foolish for an efficient water agency to deny every permit that might conceivably have an impact on Minimum Desirable Streamflow." (City's Findings, p. 39, fact 69.) The District agrees that traditional uses such as municipal use, industrial use, irrigation use, or domestic use, where the water is directly appropriated for consumptive purposes, may have an impact on MDS under the right circumstances. However, when these water rights are granted, the potential future impacts on an Aquifer and MDS must be

considered, in addition to analyzing other concerns. However, when an irrigation right is granted, for example, it is understood that water will be taken out of the Aquifer that was not injected there. Thus, the concepts of safe yield and over-appropriation are very important. However, the City was able to obtain artificial recharge credits in a heavily over-appropriated area because these credits are supposed to be Aquifer neutral. In overly simplified terms, the same water that is injected is subsequently taken out. However, the problem with AMCs is that they are not Aquifer neutral. The impacts to MDS could be catastrophic in a heavily appropriated area. Thus, in further response to the City's argument, the District's position is that MDS is taken into account up front and the District is not contending that every *de minimus* impact to MDS must prohibit the granting of a water right. However, in the case of the City's Proposal, as modeled by Mr. Romero, the withdrawal of AMCs and recharge credits, especially during a drought could cause river levels to go dry and impact MDS for many months. Additionally, withdrawing recharge credits (both physical and AMCs) below the existing Minimum Index Level just further drastically impacts MDS.

XV. A Change or New Application Should Have Been Filed

The City offered a few responses to counter the District's contention that a new application or a change application is required. However, none of these arguments by the City have merit. As a threshold, all parties agree that the City did not file a change application or a new application. (*See, e.g., id.*, p. 2, fact 9.) The City admits that a change application is needed if there is a change in "the point of diversion, place of use or use made of water." (*Id*. at p. 2, fact 10.) In this scenario, the City's Proposal has the potential to alter all three of these attributes. Foremost, the use made of water changes. With the City's Proposal, there is no use made for artificial recharge with AMCs. Instead, when river high flow is pumped, the City

diverts surface water for municipal use. It then later takes subsequent credits out of the Aquifer and again appropriates them for municipal use. The artificial recharge use has been changed to a municipal use. DWR even admits this in its Brief. (*See* DWR's Findings, p. 10, fact 3.) The City will make two municipal uses of water at the same time. Thus, the use made of water has undoubtedly changed and this justifies the need for the City to pursue a change application.

Likewise, the point of diversion changes as well. With a physical recharge credit, there is only one point of diversion. The point of diversion is the Little Arkansas River. The credits are then temporarily stored in and diverted back out of the Aquifer at a later time. However, the source of the water is the Little Arkansas River. With AMCs, there are two points of diversion: water diverted from the Little Arkansas River directly to the City and then brand-new water diverted directly out of the Aquifer. Since the water taken from the Aquifer does not have the attributes of just being temporarily stored, this is a brand-new diversion of water. Consequently, the City is adding a point of diversion and a change or new application is required.

The City admits that circumstances have changed that warrant changes to its permits. For instance, the City argues that "new information" has influenced the City's latest modeling—especially the 2011-2012 drought. (City's Findings, p. 8, fact 56.) The City contends it "is seeking to have the chief engineer take into account entirely new circumstances, including current high water levels, drought modeling following the experience of the 2011-2012 drought, and 2016 regulatory changes, all of which have come into being since the existing permit conditions were approved." (*Id*. at p. 11, fact 14.) Thus, the City admits that new information and new circumstances have justified its efforts to alter its permits. These changed circumstances are also causing the City to seek changes to its water rights that require the filing of a change or new application.

The City next cites 82a-708b to support the proposition that the "three types of substantive changes specifically addressed" does not mean the legislature intended to "prohibit all other changes that might be requested by permit holders, particularly changes in permit conditions that are less substantive features." (*Id.*, p. 12, fact 19.) The City also eludes to the fact that its Proposal embodies "less significant permit modifications" than those addressed by the statute. (*Id*.) However, the City never explains how lowering the minimum index levels, AMCs, and doubling its consumptive use, is somehow a less substantive feature than merely changing a point of diversion, for example. The reality is that the City's Proposal embodies drastic changes to its permits that require the City to seek a new or a change application. To solidify the District's point on this subject, the City writes, "The proposal to lower the bottom index levels from the 1993 levels was characterized by Mr. Lane Letourneau as a fundamental modification of permit conditions." (*Id*. at p. 4, fact 26.) Thus, DWR saw this change impacting the very heart of the City's permits. Consequently, the City admits that the DWR considers this a very significant modification. Thus, a change or new application is warranted.

The District also acknowledges that with physical recharge credits the BSA is the place of use for the artificial recharge authorized by surface water Permit No. 46,627. If the minimum index level is lowered, the place of use (BSA) expands and allows increased pumping of recharge credits to the tune of 79,500 acre feet. (City's Findings, p. 36, fact 48.) Thus, the City's Proposal also changes the place of use. The Intervenors previously advanced this argument and the District has also suggested this possibility in the past. This is a strong argument that further justifies the need for a change application. The City's failure to file a change application or a new application is fatal to its Proposal. In fact, one could easily argue that the changes the City seeks are so fundamental that the Proposal is describing an entirely new

ASR project that would be subject to all of the requirements of a new ASR project as outlined in the ASR regulations and therefore would require all new permit applications to be filed.

XVI. The City's Contention that AMCs Are Merely a "Change in Accounting"

One of the most creative and entertaining arguments of the City and DWR is that AMCs are merely a "change in accounting." (*Id*., p. 3, facts 15-16, 20; p. 4, fact 24.) Likewise, it writes that "the storage referred to occurs in the basin storage area, by virtue of the accounting methodology." (*Id*. at p. 25, fact 85.) In an approach that would make Bernie Madoff or the Enron accountants proud, the City is essentially arguing that it can breathe life into AMCs by metaphorically cooking the books. Like when an accountant alters the ledger books to create a new credit and it results in a financial nightmare, altering the accounting in this case creates a completely new form of consumptive use that will deplete the Aquifer and enrich the City with additional water rights and property rights. It is obvious the City should not be allowed to create something, that would be otherwise illegal and problematic on numerous levels, merely by some crafty accounting procedures. Former Chief Engineer Pope indicated that AMCs are far more than just a change in accounting. (*See* Pope Expert Report - District Exhibit 2.) This argument clearly has no merit.

The City goes so far as to argue: "The AMC accounting procedure would simply allow the City to obtain the *same credits* it could obtain under its existing permits, but without pumping a hole in the aquifer to create capacity for physical recharge." (City's Findings, p. 23, fact 65 (emphasis added).) This is literally the first time the City has moved beyond the functional equivalent concept and argued that physical recharge credits and AMCs are the same credits. Of course, this is not supported by any analysis. Further, the District has documented in great length how AMCs and physical recharge credits are very different in scope.

The City also contends that if it improves the accounting, the prior Orders do not require a hearing. (*Id*. at p. 3, facts 20, 24.) This ability to avoid a hearing only applies to the accounting portion. It also only applies if the accounting approach is "improved." In this case, vast discrepancies were proven with the City's new proposed accounting methodology and there is no evidence that it has been improved, rather it is a totally new type of "accounting." Although it may be easier to calculate, by all accounts, it is less accurate. (District's Brief, pp. 51-55.) Moreover, any change in accounting still requires review and recommendation by the District. (September 18, 2009, ASR Phase II Order.)

XVII. Lowering Minimum Index Level

Perhaps the most obvious part of the City's Proposal that should be denied is its effort to lower the Minimum Index Level. By the City's own admission, other than benefitting its ability to seek recharge credits, there were no identified benefits of lowering the minimum index level—only numerous harms to the Aquifer that will be addressed one last time. As indicated, DWR considers this "a fundamental modification of permit conditions." (City's Findings, p. 4, fact 26.)

But before we delve into the harms to the Aquifer, the City seems to be suggesting that Mr. Clement inferred that the minimum index level was modified in the past. (*Id*. at p. 5, facts 29 and 30.) However, the minimum index level was never reset. It was a mere technical correction. In fact, the City admits that Mr. Boese, as the manager of the District and the person directing Mr. Clement's work, testified that the recalculations were "correctional." (*Id.*, p. 6, fact 37.) The calculations really just incorporated a little additional data that was obtained. (*Id*. at p. 6, fact 38.) Thus, to the extent the City is attempting to now argue that the minimum index level was reset in the past, this is obviously contrary to the testimony and the reality of what occurred.

The City wisely never attempts to take this contention to its logical conclusion, as any implication in this regard would be spurious, and there is thus simply no argument to advance.

The City admits that the only party really benefited by lowering the minimum index levels *is* the City. It writes, "Lowering the existing lower index limits would *only* have the effect of facilitating recovery of credits because the lower index limits only restrict recovery of credits." (*Id*., p. 37 (emphasis added).) The City further contends, "The proposed adjustment will also be beneficial in that it will allow the City to access more of the credits created by ASR operations when those credits are needed for drought response." (*Id*. at p. 43, conclusion 15.) Again, this modification will only benefit the City in allowing it to consume more recharge credits during the time of a drought and when the Aquifer is most vulnerable. Even the most rudimentary of logic makes it impossible to understand how this could possibly benefit any stakeholder in the Aquifer other than the City. The naked truth is that lowering the minimum index level is harmful to the Aquifer by allowing the City to pump out more water, while undermining MDS and water quality.

On minimum index levels, the *only* argument the City suggests may be beneficial to other users is the fact that it may be allowed to "avoid the need to withdraw credits at the early stages of a drought" and thus the Aquifer could be managed fuller for longer. However, the City never modeled how banking credits is actually beneficial for the Aquifer. In fact, based on the testimony of Dave Romero, using credits in the later stages of a drought may actually be even more harmful. (Romero Expert Report – District Exhibit 68.) If the City uses its credits early, the District and DWR can manage the Aquifer in the later years of a drought, as can other users. There is no benefit to anyone to have one party that has a super priority on Aquifer depletion at the very moment when the Aquifer is most depleted and vulnerable. This will only undermine

MDS, facilitate fast and rapid movements of the Chloride Plume, and deplete the water supply during a critical time.

Moreover, the City admits that it had to use 1998 levels to justify the need to lower the minimum index levels. With 1998 levels, only 14,900 acre feet of recharge credits could be obtained during a modeled 8-year drought based on the current minimum index levels. (City's Findings, p. 33, facts 26, 27.) However, the City writes, "If the Burns and McDonnell modeling had been done with starting levels representing the aquifer as 100 percent full, versus the 1998 levels, that would impact or change the outcome of the modeling; if you start with water levels higher, it is logical to assume you will end with water levels higher as well." (*Id*. at p. 34, fact 28.) The City continues, "If the Burns & McDonnell modeling were redone starting with the aquifer 100% full, the existing minimum index levels would not be affected as soon." (*Id*. at p. 34, fact 29.) Thus, the City admits to and buttons up one of the District's main arguments: the City picked the 1998 levels to justify the need to lower the minimum index level. Yet, the entire premise of the City's Proposal is that it will keep the Aquifer full heading into a drought and that is how AMCs are accumulated. If this corollary is actually true, then the City does not need to lower the minimum index levels as credits would not be stranded. At the very least, the City should have performed this crucial modeling. Had it been performed, it undoubtedly would have supported the fact that there is no need to lower the minimum index levels and the City now seems to acknowledge this reality.

Lowering the minimum index levels will have uniformly detrimental impacts to the Aquifer. However, there is simply no need to rely on the District to support this proposition. The City now admits this fact as substantiated by the following quotations from the City's Findings. The City contends, "The proposed lower index levels will involve potential

detrimental impacts, in that lower aquifer levels will adversely impact chloride contamination because if water levels are lower, the tendency of the plumes, both natural and manmade will be to move, with some exceptions." (*Id*. at p. 35, fact 41 (citing City's own witness to support proposition).) On the topic of water quality, the City also offers the following fact: "The projected potential to induce chloride migration is also a modeled impact of lowering water levels to the proposed minimum index levels…." (*Id*. at p. 22, fact 58.) Regarding impairment of wells, the City acknowledges, "The projected impact to the six additional wells is a modeled impact of the new lower index levels and not a modeled impact of AMCs. (*Id*. at p. 21, fact 56.) It continues, "The projected new streamflow depletion is also a modeled impact of pumping credits to the proposed minimum index levels…." (*Id*. at pp. 57-58, fact 57.) The City even attempts to sacrifice the concept of lowering the minimum index levels, in maintaining that this feature of the Proposal causes all the modeled harms, in a desperate, last-ditch effort to salvage AMCs. The City concludes, "Unlike the AMCs component of the City's proposal, the proposed adjustment to the lower index levels does have some potential detrimental impacts in the nature of potentially increased chloride migration, stream depletion, drawdown of the aquifer and impact on existing domestic wells." (*Id*. at p. 41, conclusion 3.)

In summary, the Hearing Officer only needs to adopt the City's various facts that admit that lowering the minimum index levels will threaten the viability of the Aquifer while *only* benefitting the City. However, the City does acknowledge the arguments of Mr. Romero and Mr. Austin in supporting the proposition that lowering the minimum index levels will accelerate the migration of the Burrton Chloride Plume. (*Id*. at p. 41, facts 78, 79.) For obvious reasons, the City makes no attempt to refute this obvious fact. In reality, the City has now seemingly surrendered to the reality that lowering the minimum index levels is universally harmful to the

Aquifer. Clearly, it merits stressing that there is simply no credible argument justifying this aspect of the Proposal. The District asks that the Hearing Officer to protect the public interest and ensure that the minimum index level is not lowered. (*See* ASR Phase I Order.)

XVIII. Source of Water

Although not much analysis will be devoted to this point, the District must reiterate that the City will be tapping into a new, undefined source of water through AMCs. However, coupled with the lowering of the minimum index levels, the problem for the City is compounded. Mr. Letourneau testified that the basin storage area is like a box where the City can store credits and all water below the current minimum index level is native groundwater from the Aquifer. (District's Findings, facts 101, 268.) Thus, if the minimum index levels are lowered, with AMCs, the City will be appropriating water that is native to the Aquifer. This will also be true in the case of physical recharge credits if the bottom of the "box" changes. Although this argument is supported by Mr. Letourneau's testimony, it merits reiterating that regardless of whether the minimum index levels are lowered, with AMCs, the only source of water for the credits will be native groundwater. This has essentially been conceded both by the City and by DWR.

XIX. New Argument that the District Lacks Standing

The City throws a complete Hail Mary and argues for the first time that the District lacks standing as it relates to the city Proposal regarding AMCs. This argument is one of the most bizarre notions raised by the City. The District and the Intervenors have obviously identified many cognizable defects with the City's Proposal. Thus, standing should exist for this reason. Additionally, former Chief Engineer Barfield previously ruled that the District is a formal party to the Hearing and the current Hearing Officer agreed. Thus, the District undoubtedly has standing. Perhaps the District's experts' testimony, expert reports, and other evidence was so

damning to the City's AMC Proposal that the City believes the only chance they have of approval at this juncture is to remove the District's well founded arguments from these proceedings. This farfetched argument should also be disregarded as it is raised for the first time subsequent to the Hearing and is untimely.

XX. The *Williams* Case and Attacks on Romero Modeling

DWR and the City launch into an identical analysis of the *Williams* case. (*See, e.g.*, DWR's Brief, pp. 69-70.) Since the arguments by the City and DWR are identical, this is addressed in response to the Intervenors' Brief, as is the City's attacks on the Romero modeling.

XXI. The *Clawson* Case

Since the City, the Intervenors, and DWR address the *Clawson* case, the District will address all arguments in its Response to the Intervenors.

XXII. Statutory and Regulatory Construction

The City does not perform a deep dive into the statutory and regulatory arguments advanced by the District. However, the City does provide several comments in this regard that should be addressed. The District focused much analysis to the term "subsequent appropriation." The City provides the following retort: "The words 'subsequent recovery' signified that the water stored in the aquifer via the accounting method would be appropriated by a different permit." (City's Findings, p. 26, fact 90.) First of all, an "accounting method" cannot store water in an aquifer, as an "accounting method" is purely a mathematical exercise to account for inputs and outputs–it is not capable of the action the City pretends it can accomplish, much in the same way a financial accounting cannot add money to a bank account; it can merely account for the money that is deposited and withdrawn. With physical recharge credits, the "different permit" is for artificial recharge. AMCs don't use that permit according to DWR. As argued by DWR, AMCs, when

withdrawn, are merely another type of municipal use. Thus, because there is no artificial recharge permit involved, and no storage in the Aquifer of water injected by the City, there is no opportunity for subsequent recovery. Likewise, you can't store something merely by creating a new accounting approach. The District stands by its detailed analysis of this terminology of "subsequent recovery" in prior filings.

In this almost identical vein, the City also indicates, "The recovery system is the same as for a physical recharge credit." (City's Findings, p. 25, fact 86.) It is interesting the City zeroes in on the word "recovery system." Indeed, this is a key feature of the regulations and "recovery system" is a central phrase. (See id. at p. 25, fact 87.) Certainly, it is helpful that the City highlights this term. "Recovery" is a derivative of the word "recover." The primary definition the Merriam-Webster Dictionary offers for the term "recover" is "to get back." (*See* https://www.merriam-webster.com/dictionary/recover.) In this case, the City's focus on this phraseology is very timely in light of the discussion on the word "storage." The term "recovery" when construed with the term "storage," illuminates the District's arguments even more clearly. Indeed, with AMCs, no water is actually placed in storage. Thus, there is no water to recover or "get back" because the City never injected the water in the first place. You simply can't recover something you never had in the first place. Thus, it is very helpful that the City highlights this term, without explanation as to its applicability, and invites the District's response. This phrase further solidifies the District's position that AMCs, unlike physical recharge credits, do not fit within the scope of "recovery" or a "recovery system" as used throughout the regulations.

As indicated above, the term "storage" is further intertwined with the concept of "recovery system" and "subsequent recovery." On this point, in examining how source water is stored in the Aquifer, the City contends: "The phrase refers to where the water is and not how it

got there." (City's Findings, p. 25, fact 89.) This contention is particularly difficult to understand. In an aquifer storage and recovery system, it is very hard to conceptualize why it wouldn't matter how or why the water came into existence in the aquifer. In fact, this seems to lie at the very heart of a determination of whether these regulations apply. By the City's logic, it doesn't matter whether rainfall allowed for the natural recharge of the Aquifer, whether the water is dedicated to another user, or even if another municipality (such as the City of Newton or Halstead sometime in the future) injects the water. According to the City, it only matters that the water exists in the Aquifer. This contention is clearly nonsensical and offers nothing to further the discussion of how AMCs could somehow fall within an aquifer storage and recovery system. In fact, the lack of a better explanation of the similarity of storing water pursuant to these two approaches, only further solidifies the District's position that no source water is stored in the Aquifer with AMCs. The current regulations governing artificial recharge prohibit AMCs.

The City contends that water taken from the Aquifer doesn't "magically come back." (*Id*., p. 35, fact 36.) As a corollary, water doesn't magically appear in the Aquifer pursuant to recharge credits unless the City places it there. Despite the City's contention to the contrary, *how* the water originates in the Aquifer is critical to the calculus.

The City also contends, again without a semblance of explanation, "With respect to an AMC, it is not necessary to put water into an unsaturated portion of the aquifer *per se*." (*Id*., p. 26, fact 91.) Again, the District maintains that words matter, and the legislature used terms such as "unsaturated" for a reason. Again, without reiterating this very obvious argument, in contravention of this regulation, AMCs are accumulated when the Aquifer is fully *saturated*. If DWR and the City wish to help rewrite regulations, this is simply not the forum.

The City also contends, "With respect to the definition of aquifer storage and recovery system, all aspects of the definition were met." (*Id*., p. 26, l. 92.) As indicated, no analysis by the City or the DWR support this blanket statement. In the words of Abraham Lincoln, "History is not history, unless it is the truth." Likewise, the City cannot make AMCs legal simply by saying so. The City and DWR cannot orchestrate a mere change in accounting to conjure AMCs, while sacrificing established regulations and eliminating common sense regarding artificial recharge credits in the wake of such a pronouncement. (*See id*., p. 25, fact 84 (arguing that AMCs can be created and storage occurs "by virtue of the accounting method").

For all the above reasons, the District respectfully asks that the City's Proposal be denied.

RESPECTFULLY SUBMITTED:

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CERTIFICATE OF FILING AND SERVICE

We, Thomas A. Adrian and David J. Stucky, do hereby certify that a true and correct copy of the above was served by (___) mail, postage prepaid and properly addressed by depositing the same in the U.S. mail; (___) fax; (_x__) email; and/or (___) hand delivery on the 4th day of October, 2021, to:

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