



resource management plan intended to combat Aquifer declines and slow the migration of the Burrton salt plume.<sup>7</sup>

3. As part of the ILWSP, the City began to use Cheney Reservoir for its primary municipal water supply and correspondingly reduced its reliance on the Aquifer.<sup>8</sup> The City now takes its municipal water supply primarily from Cheney, and the Aquifer's water table has rebounded substantially as a result.<sup>9</sup>
4. Another aspect of the ILWSP is the City's aquifer storage and recovery project ("the Project"), which since its inception has allowed the City to divert surface water flows from the Little Arkansas River during times of high flows, treat that water to drinking water standards, inject it into the Aquifer, and later withdraw a corresponding amount of water from the Aquifer.<sup>10</sup>
5. The Project currently consists of two "phases."<sup>11</sup> Phase I was approved by DWR in 2005 and was intended primarily to build a hydraulic barrier within the Aquifer that would slow the migration of the Burrton salt plume.<sup>12</sup>
6. The Findings and Orders that approved Phase I of the Project established the Basin Storage Area ("BSA"), the portion of the Aquifer within which the Project is permitted to operate.<sup>13</sup> The BSA currently occupies approximately the top 12 percent of the Aquifer. Phase I also established 38 "index cells" within the BSA.<sup>14</sup> These index cells allow water levels at a given point within the BSA to be evaluated based on specific hydrological conditions, which vary somewhat across the BSA.<sup>15</sup>
7. In addition to creating a hydraulic barrier that slows the migration of the Burrton salt plume, the City's injection of surface water into the BSA facilitates the accumulation of "recharge credits," which allow the City to withdraw a volume of water from the BSA that corresponds to the volume of treated Little Arkansas River surface water it previously injected.<sup>16</sup> Under Phase I, the City is permitted to withdraw up to 19,000 acre-feet of water per year based on its accumulation of recharge credits.<sup>17</sup>

---

<sup>7</sup>City's Exhibit 1, p. 1-1.

<sup>8</sup>Transcript, Vol. I, page 145, lines 15-25; *See also* Transcript, Volume I, p. 146, lines 1-25.

<sup>9</sup>Transcript, Volume I, p. 145, lines 15-25; Transcript, Volume I, p. 271, lines 11-14.

<sup>10</sup>*See* City's Exhibit 1, Attachment H, p. 15; Transcript, Volume II, p. 295, lines 2-13.

<sup>11</sup>*See* Transcript, Volume I, p. 150, lines 10-16.

<sup>12</sup>*See generally* Findings, Conclusions, and Order In the Matter of the City of Wichita's Applications to Operate an Aquifer Storage and Recover Project in Harvey and Sedgwick Counties, Kansas ("Phase I Findings and Orders"), issued by David L. Pope, Chief Engineer, Kan. Dep't of Agric., Div. of Water Res., Aug. 8, 2005; *Id.* at p. 8, para. 38.

<sup>13</sup>*Id.* at p. 12, para. 11.

<sup>14</sup>*Id.* at p. 5, para. 29.

<sup>15</sup>*See* City's Exhibit 1, Proposal, p. 4-2 (discussing the varying degrees of water loss experienced in different portions of the BSA).

<sup>16</sup>*See* Phase I Findings and Orders; K.A.R. 5-1-1.

<sup>17</sup>Transcript, Volume V, p. 1247, lines 6-8.

8. The Phase I Findings and Orders established a “minimum index level” for each index cell and prohibited the City from withdrawing recharge credits when water levels are below that level.<sup>18</sup> The minimum index levels established in Phase I constitute the current bottom of the BSA and allow the City to withdraw recharge credits as long as the Aquifer is approximately 88 percent full on average.<sup>19</sup> The minimum index levels exist only within the context of the Project—the City’s native water rights in the Equus Beds Wellfield would not prohibit it from withdrawing water when the Aquifer’s water table is below the currently-established minimum index levels.<sup>20</sup>
9. The Phase I Findings and Orders also established “maximum index levels” that prohibit the City from injecting water into the BSA when the water table is less than 10 feet below land surface.<sup>21</sup>
10. Additionally, the Phase I Findings and Orders established the accounting procedure by which the City’s accumulation of recharge credits is tracked.<sup>22</sup> This procedure accounts for the amount of injected water that is lost to the Aquifer over time, as well as the migration of water between index cells.<sup>23</sup> The Phase I Findings and Orders provided that new accounting methods developed in the future, those methods should be approved if they improved the existing recharge credit accounting method and was sufficient to allow the City to comply with K.A.R. 5-12-2(a) and (b).<sup>24</sup>
11. Finally, the Phase I Findings and Orders prohibited “passive recharge,” with then-DWR Chief Engineer David Pope expanding on the concept of passive recharge by writing that the Phase I proceedings would address whether the City “[would] be considered to be recharging water into the Equus Beds by the concept of ‘passive recharge?’ – i.e., water which the City could have legally pumped, but did not pump.”<sup>25</sup>
12. To date, Phase I of the Project has allowed the City to inject 1,233,000,000 gallons of water in front of the leading edge of the Burrton salt plume.<sup>26</sup>
13. Phase II of the Project was approved by DWR in 2009 by then-DWR Chief Engineer David Barfield.<sup>27</sup> Phase II uses a surface water intake right on the Little Arkansas River, water right file number 46,627, to divert high flows.<sup>28</sup> Water right file number 46,627 is

---

<sup>18</sup>Phase I Findings and Orders, p. 12, para. 12; City’s Exhibit 1, Proposal, p. 1-1.

<sup>19</sup>*See Id.*

<sup>20</sup>*See* Phase I Findings and Orders; In the Matter of the Findings and Order for the city of Wichita’s Aquifer Storage and Recovery Project – Phase II (“Phase II Findings and Orders”) (establishing the minimum index levels—the minimum index levels were never established for any non-Project water rights).

<sup>21</sup>Phase I Findings and Orders, p. 15, para. 8.

<sup>22</sup>*See id.* at para. 5.

<sup>23</sup>*See* City’s Exhibit 1, Proposal, p. 4-1 and 4-2.

<sup>24</sup>Phase I Findings and Orders, p. 12, para. 16.

<sup>25</sup>*Id.* at p. 2, para. 10.

<sup>26</sup>City’s Exhibit 10, Page 2.

<sup>27</sup>*See* Phase II Findings and Orders.

<sup>28</sup>Transcript, Volume VIII, p. 2271, lines 4-8; *See* Approval of Application and Permit to Proceed in the matter of water right file number 46,627, issued by David W. Barfield, Chief Engineer, Kan. Dep’t of Agric., Div. of Water Res., September 18, 2009.

permitted for two beneficial uses of water recognized by the Kansas Water Appropriation Act (“KWAA”)—municipal use and artificial recharge use.<sup>29</sup> The City can either take diverted surface water directly to the City’s main water treatment facility for municipal use or treat it to drinking water standards and inject it into the BSA for artificial recharge use, subject to the index level requirements established in Phase I.<sup>30</sup> Phase II allows the City to then withdraw water from the BSA using recharge and recovery wells in the Equus Beds Wellfield based on recharge credits it earns as a result of surface water injection.<sup>31</sup> The water withdrawn from the BSA based on the City’s accumulation of recharge credits is ultimately put to municipal use.<sup>32</sup> The surface water intake right and each recharge and recovery well are operated under the authority of separate water rights, and they are also all separate from the City’s native water rights in the Equus Beds Wellfield and are all governed by separate authorized annual quantities and authorized rates of diversion.<sup>33</sup>

14. Phase II was approved with the same BSA boundaries, index cells, minimum index levels, and accounting methodology established in Phase I, and passive recharge was also prohibited under Phase II.<sup>34</sup>
15. In recent years, the City has shifted its water resource management focus away from slowing the migration of the Burrton salt plume and toward planning for a severe, “one-percent” drought.<sup>35</sup> In 2014, the City initiated a series of studies, which found that the City would need more water than its existing water rights provided in the event of a prolonged drought.<sup>36</sup> These studies also indicated that the Project would be the City’s only reliable water source during a one percent drought.<sup>37</sup>
16. The existing Phase II Project requirements pose several obstacles to the City’s drought planning efforts. First, a one-percent drought would likely cause the water level in the Aquifer to drop below the currently-established minimum index levels, so the City would risk stranding its earned recharge credits if it waits until the end of a drought to withdraw them.<sup>38</sup> Conversely, if the City withdraws its accumulated credits at the beginning of a drought in order to avoid a scenario where the credits are stranded, it risks withdrawing the credits too early, essentially needlessly lowering the Aquifer’s water table.<sup>39</sup> Second, the Aquifer is currently functionally full, and thus the City cannot inject surface water

---

<sup>29</sup>Approval of Application and Permit to Proceed in the matter of water right file number 46,627, p. 1, para. 2; Transcript, Volume VIII, p. 2271, lines 7-10. *See* K.A.R. 5-1-1(o) (listing the beneficial uses of water recognized by the KWAA).

<sup>30</sup>Transcript, Volume VIII, p. 2271, lines 11-22; Approval of Application and Permit to Proceed in the matter of water right file number 46,627.

<sup>31</sup>Phase II Findings and Orders, p. 1, para. 5.

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

<sup>33</sup>*See generally* Phase II Findings and Orders.

<sup>34</sup>*Id.* at p. 5-7, paras. 1-17.

<sup>35</sup>Transcript, Volume I, p. 163, lines 19-25 and p. 164, lines 1-11.

<sup>36</sup>*Id.* at p. 165, lines 9-22.

<sup>37</sup>City’s Exhibit 1, Proposal Cover Letter, Page 2; Transcript, Volume V, p. 1242, lines 21-25.

<sup>38</sup>City’s Exhibit 10, Page 3.

<sup>39</sup>Transcript, Volume I, p. 176, lines 23-25; Transcript, Volume I, p. 177, lines 1-18.

into the BSA for the accumulation of new recharge credits unless it either violates the requirement that injection not occur when the water table is less than 10 feet below land surface or it first withdraws water from the BSA for the sole purpose of lowering the water table so that injection can be accomplished.<sup>40</sup>

b. Proposal at Issue

On March 12, 2018, in an attempt to remedy the aforementioned issues and enhance its drought preparedness, the City submitted proposed modifications to its Phase II permits (“the Proposal”) to Chief Engineer Barfield. Findings of Fact relevant to the Proposal are as follows:

1. The Proposal contains two primary components:
  - a. The City proposes the established minimum index levels be lowered such that the City would be permitted to withdraw recharge credits as long as the Aquifer is approximately 80 percent full, rather than the currently required 88 percent; and
  - b. the City proposes that it be permitted to send water diverted from the Little Arkansas River that, due to a high water table cannot be physically injected into the Aquifer, directly to the City’s main water treatment plant.<sup>41</sup> Under the Proposal, the water that remains in the Aquifer as a result of the City taking Little Arkansas River surface water directly to town rather than pumping the Aquifer down to allow for injection would allow the City to earn Aquifer Maintenance Credits (“AMCs”).<sup>42</sup> AMCs would be treated similarly to the recharge credits the Project currently allows the City to generate, and the AMCs that the City is allowed to withdraw at any given time would be tracked separately from physical recharge credits through a new proposed accounting methodology that would be used only to track the accumulation of AMCs.<sup>43</sup>
2. The two aspects of the Proposal (the lowered minimum index levels and the accumulation of and accounting for AMCs) are separate and independent from one another. Both aspects of the Proposal could be approved, both could be rejected, or one could be approved and the other could be rejected.<sup>44</sup>
3. The City’s proposed AMC accounting would assign AMCs to each index cell on an annual basis by the following methods:
  - a. AMCs would be assigned to an index cell by dividing the total volume of water diverted from the Little Arkansas River to the City’s main water treatment plant by the total number of points of diversion in the Equus Beds Wellfield that are in

---

<sup>40</sup>See Transcript, Volume I, p. 151, lines 19-25, p. 152, lines 1-8; Transcript Volume I, p. 158, lines 23-25 and p. 159, lines 1-7.

<sup>41</sup>City’s Exhibit 1, Proposal Cover Letter, Page 2.

<sup>42</sup>*Id.*

<sup>43</sup>*Id.*

<sup>44</sup>Transcript, Volume V, p. 1241, lines 16-23.

service that year (excluding Phase I recharge and recovery wells). This would distribute AMCs equally across the production wells that could have pumped water from the BSA;

- b. a one-time initial loss value of 5 percent would be deducted from the total number of AMCs credited to each index cell. This initial loss value would account for losses to the Aquifer inherent in the injection and recovery process; and
  - c. an average annual recurring loss value would be applied annually to each index cell to account for recharge credit migration from the BSA. This recurring loss value would be applied gradationally across the BSA in order to account for the fact that this type of loss is highest on the east side of the BSA, lowest on the west side, and is moderate in the central area of the BSA. A 5 percent annual recurring loss value would be applied to the index cells on the east side of the BSA, a 3 percent annual recurring loss would be applied to the central area index cells, and an annual recurring loss value of 1 percent would be applied to the western index cells. The average annual recurring loss value applied across all index cells would be 3 percent.<sup>45</sup>
4. The proposed loss rates of 5 percent initially and an additional average of 3 percent annually are supported by past modeling results, drought modeling, and the hydrology of the Aquifer.<sup>46</sup>
  5. In addition to the proposed accounting procedure outlined above, the City also submitted a list of seven key items summarizing the permit conditions that would pertain to the accumulation and accounting of AMCs under the Proposal:
    - a. The City will continue to physically recharge the Aquifer through injection when it is possible to do so;
    - b. The rate of accrual of all recharge credits cannot exceed the constructed physical diversion capacity of the ASR system...and will be limited to the rate and quantity authorized by Water Right No. 46,627;
    - c. The Project's Phase I recharge and recovery wells will not be permitted to generate AMCs;
    - d. The City cannot receive credit for more than 120,000 acre-feet of water, through physical recharge credits and AMCs combined (120,000 acre-feet is the approximate size of the "hole" that existed in the Aquifer in January 1993 and constitutes approximately 11.7 percent of the Aquifer's total available storage area);
    - e. The City will calculate AMCs it generates using an alternative or modified accounting process that is different from the accounting used to track physical recharge credits;
    - f. AMCs would be accumulated "based on the metered quantity of water diverted from the Little Arkansas River via direct surface water diversions or water

---

<sup>45</sup>City's Exhibit 1, Proposal, p. 4-3.

<sup>46</sup>*Id.*

- captured via bank storage wells and sent directly to the City;” and
- g. The City would adopt a “straight-forward spreadsheet accounting process” to track its accumulation and use of AMCs.<sup>47</sup>
6. The City has not proposed that it be granted any additional water rights or that the authorized quantities or rates of any of its existing water rights be changed.<sup>48</sup> It also has not proposed to change the 19,000 acre-feet limitation on the withdrawal of recharge credits established by the Phase I Findings and Orders.<sup>49</sup>
  7. In conjunction with the Proposal, the City conducted modeling work to simulate water levels in the Aquifer under various conditions.<sup>50</sup> That modeling shows that, at the end of a one percent drought during which the City has used all of the water that the Proposal would allow it to, the Aquifer would remain more than 80 percent full on average.<sup>51</sup>

c. Procedural History

For various reasons, proceedings in this matter have been ongoing since the City submitted its Proposal in March 2018. Relevant procedural history is as follows:

1. In the summer of 2018, following initial review of the Proposal, Chief Engineer Barfield determined that he would preside over a formal phase public hearing to gather evidence and hear public comments regarding the Proposal.<sup>52</sup> It was determined that parties to the formal phase public hearing would be the City, DWR, Equus Beds Groundwater Management District Number 2 (“the District”), and a group of landowners who filed a timely petition to intervene in the matter and who Chief Engineer Barfield determined owned water rights that could potentially be impacted by the Proposal (“the Intervenor”).<sup>53</sup>
2. The formal phase public hearing was originally scheduled to take place on March 26 and 27, 2019, with the purpose of determining whether the Proposal was lawful and permissible and, if the Proposal was deemed lawful and permissible, determining permit conditions that it should be approved subject to in order to safeguard the rights of other area water right owners.<sup>54</sup>

---

<sup>47</sup>City’s Exhibit 1, Proposal, p. 3-6. Currently, there is no cap on the number of physical recharge credits the City is permitted to accumulate. *See generally* Phase II Findings and Orders.

<sup>48</sup>*See generally*, City’s Exhibit 1.

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

<sup>50</sup>City’s Exhibit 1, Proposal, p. 2-3.

<sup>51</sup>*Id.* at p. 2-16.

<sup>52</sup>*See* Notice of Pre-Hearing Conference for the Consideration of Modifications to the Phase II of the City of Wichita’s Aquifer Storage and Recovery (ASR) Project, July 2, 2018.

<sup>53</sup>*See* Order Regarding the Designation of Parties for the Formal Phase of the Public Hearing, Oct. 26, 2018.

<sup>54</sup>*See* Notice of Final Hearing Schedule, Dec. 21, 2018.

3. The District filed a Motion to Dismiss on March 18, 2019, citing numerous reasons it believes the Proposal should be rejected, and the Intervenor filed a motion in support thereof.<sup>55</sup> The District's Motion to Dismiss remains pending.<sup>56</sup>
4. On March 19, 2019, the authority to preside over the formal phase public hearing was delegated to Constance C. Owen, and the formal phase public hearing was postponed. Ms. Owen was directed to conduct the hearing and, at the conclusion of the hearing, provide written recommendations regarding the Proposal to the Chief Engineer.<sup>57</sup>
5. The formal phase public hearing, presided over by Ms. Owen, began in Halstead, Kansas on December 10, 2019 and was scheduled to conclude in March 2020.<sup>58</sup> However, the COVID-19 pandemic necessitated the postponement of the formal phase public hearing, and the proceedings did not ultimately conclude until February 2021.<sup>59</sup>
6. In addition to the Motion to Dismiss filed by the District and the Motion in Support thereof filed by the Intervenor, all parties also filed Prehearing Briefs. Additional arguments were also raised during the formal phase public hearing. The District and the Intervenor argue that the Proposal should be dismissed for numerous reasons, as follows:
  - a. The City was required to have filed an application for a new appropriation water right with DWR pursuant to K.S.A. 82a-709, and its failure to do so is fatal to the Proposal;
  - b. the City's water use under the AMC aspect of the Proposal would be to accumulate AMCs, which is not a beneficial use of water recognized by the KWAA, and the AMC aspect of the Proposal would allow the City more uses of water than it should be entitled to;
  - c. the City was required to file a change application with DWR pursuant to K.S.A. 82a-708b, and its failure to do so is fatal to the Proposal;
  - d. the Proposal would cause impairment to existing area water rights;
  - e. the Proposal would cause streamflow on the Little Arkansas River to fall below minimum desirable streamflow levels;
  - f. the Proposal would violate safe yield principles;
  - g. the Proposal would negatively impact the saturated thickness of the Aquifer;
  - h. a multi-year flex account ("MYFA") is an adequate alternative to the Proposal for the City, and the City should be required to enter a MYFA rather than pursue the Proposal to ensure that its water use can be appropriately monitored;
  - i. the Kansas Court of Appeals' holding in *Clawson v. State, Dep't of Agric., Div. of Water Res.* (49 Kan. App. 2d 789, 792, 315 P.3d 896 (2013)) requires the Proposal be dismissed;

---

<sup>55</sup>See District's Motion to Dismiss.

<sup>56</sup>Transcript, Volume XIV, p. 3477, lines 1-2.

<sup>57</sup>Notice of Delegation and Temporary Postponement, Mar. 19, 2019.

<sup>58</sup>See Notice of Hearing, Oct. 8, 2019; Notice of Continuation of Hearing, Jan. 9, 2020.

<sup>59</sup>See Agreed Waiver of Kansas Administrative Regulation 5-12-3, Dec. 30, 2020.

- j. the method by which the City proposes to accumulate AMCs would amount to prohibited passive recharge;
  - k. the Proposal would violate the Takings Clauses of the United States and Kansas Constitutions, based on a physical Taking of water, the violation of contractual obligations, and water quality degradation;
  - l. the Proposal fundamentally violates the KWAA because the City's AMC water rights would be junior water rights, among other reasons;
  - m. these proceedings have violated the District's Procedural Due Process rights; and
  - n. the City does not have standing to advance the Proposal because it has failed to comply with K.S.A. 82a-709 and K.S.A. 82a-708b, because the *Clawson* holding prohibits the Proposal, and because the City is essentially seeking an advisory opinion from the Chief Engineer.<sup>60</sup>
7. The City and DWR dispute the aforementioned arguments and assert that the Proposal is lawful and should be approved.<sup>61</sup>
8. The relevant issues to be decided are twofold: whether the minimum index levels should be lowered as proposed and whether the City should be permitted to accumulate AMCs as proposed.<sup>62</sup> The purpose of these proceedings is to determine whether the Proposal is lawful and, if it is deemed lawful, to determine what permit conditions it should be approved subject to in order to appropriately safeguard the rights of existing area water users.<sup>63</sup>

d. Factual Findings Relevant to the Parties' Arguments

Many of the arguments raised by the District and the Intervenors are based on erroneous factual assumptions regarding the Proposal and/or what the City is currently authorized to do under its existing water rights. The District and the Intervenors have also advocated for a number of DWR statutes and regulations to be applied in an erroneous fashion. Accordingly, a brief discussion of the City's currently authorized water use, things the Proposal would not allow the City to do, and relevant statutes and regulations is warranted. Factual findings relevant to those items are as follows:

- 1. K.S.A. 82a-709 provides in relevant part, "No person may acquire a new appropriation right to the use of waters of the state for other than domestic purposes without making an application to the chief engineer for a permit to make such appropriation."<sup>64</sup> The City has not filed an application for a new appropriation water right or otherwise proposed that it be entitled to any more water than it is currently authorized to use.<sup>65</sup> All of the City's Project water rights will continue to be governed by their existing quantity and rate

---

<sup>60</sup>See District's Motion to Dismiss; District's Pre-Hearing Brief; Intervenors' Pre-Hearing Brief.

<sup>61</sup>See DWR's Consolidated Response in Opposition to GMD2's and Intervenors' Motion to Dismiss and Motion for Summary Judgment; City of Wichita's Response to Equus Beds Groundwater Management District No. 2's Motion to Dismiss.

<sup>62</sup>Transcript, Volume XV, p. 3560, lines 14-24.

<sup>63</sup>See Transcript, Volume I, p. 10, lines 16-25; p. 11, lines 1-3.

<sup>64</sup>K.S.A. 82a-709.

<sup>65</sup>*Id.*

limitations.<sup>66</sup> Additionally, the City would be limited to withdrawing 19,000 acre-feet of water each year as a result of its accumulation of recharge credits (physical recharge credits and AMCs combined). That is the same limit that currently exists on the withdrawal of recharge credits, and the City has not proposed to change it. Finally, the proposed 120,000 acre-feet cap on credit accumulation is related only to credit accumulation—it is not relevant to the amount of water that the City would be permitted to use under the Proposal.<sup>67</sup> Further, this aspect of the Proposal would simply impose a limit where none currently exists at all—there is currently no limit on the amount of recharge credits the City can accumulate through its operation of the Project.<sup>68</sup>

2. K.A.R. 5-5-3 prohibits the owner of a vested or perfected water right from increasing the Water Right's consumptive use.<sup>69</sup> The water rights at issue are not vested, and the perfection period for such water rights has not yet expired.<sup>70</sup>
3. The use of the water that the City withdraws from the BSA based on its accumulation of AMCs under the Proposal would be the recognized beneficial use of municipal use—not to accumulate AMCs. Additionally, under existing Phase II permit conditions, one “cycle” of the Project yields the City two municipal uses of water. One “cycle” of the Project under the Proposal would also yield the City two municipal uses of water. Further, physical injection of water into the BSA is not per se necessary in order for the City's use of water under the Proposal to be permissible, given the current high water table in the Aquifer. Finally, a permit condition requiring the City to physically inject water whenever the BSA's water table is below the currently-established maximum index level can be included in an order approving the Proposal.
4. K.S.A. 82a-708b applies to proposed changes in a water right's place of use, point of diversion, or use made of water.<sup>71</sup> The City has not proposed to change any of those elements of any of its water rights.<sup>72</sup> The City is already authorized under the Project to utilize two sources of water (the Little Arkansas River and the Aquifer) and two points of diversion (the Little Arkansas River surface water intake right and the recharge and recovery wells in the Equus Beds Wellfield).<sup>73</sup> Nonetheless, the Proposal itself and the City's modeling constitutes a showing that the Proposal is reasonable and will not impair existing water rights and that the City's water use under the Proposal would relate to the same local source of supply that it currently does. The Proposal will allow the Aquifer to be managed at or very near its full pre-development saturated thickness during the ninety-nine percent of the time the area is not experiencing a one-percent drought and will only leave the Aquifer approximately twenty percent depleted at the end of a one-percent

---

<sup>66</sup>See City's Exhibit 1, Proposal (the Proposal does not seek to change the authorized quantities or rates of any of the City's existing Project water rights).

<sup>67</sup>See *id.* at p. 4-8.

<sup>68</sup>Transcript, Volume I, p. 158, lines 18-22.

<sup>69</sup>K.A.R. 5-5-3.

<sup>70</sup>See Phase I Findings and Orders; Phase II Findings and Orders; Approval of Application and Permit to Proceed in the matter of water right file number 46,627, issued by David W. Barfield, September 18, 2009.

<sup>71</sup>See K.S.A. 82a-708b.

<sup>72</sup>See generally City's Exhibit 1, Proposal.

<sup>73</sup>See generally Phase II Findings and Orders.

drought.<sup>74</sup> Managing the Aquifer at a full level for the maximum amount of time it is possible to do so is in the public interest, and impairment to existing area water rights is unlikely to occur with the Aquifer 80 percent full. Finally, the City’s sources of water under the Proposal will be the Little Arkansas River and the Aquifer—the same sources of water it currently utilizes to operate the Project.<sup>75</sup>

5. K.S.A. 82a-711, which governs when the Chief Engineer can approve an application to appropriate water for beneficial use, does not apply to the Proposal because the Proposal does not constitute an application to appropriate water.<sup>76</sup> Even if K.S.A. 82a-711 was applied to the Proposal, that statute does not require a definitive showing that there is no chance the water right at issue will ever cause an impairment.<sup>77</sup> The modeling work conducted by the City constitutes a more than adequate showing that impairment is unlikely to occur under the Proposal, as it reflects that the Aquifer would remain approximately 80 percent full, even in a worst-case scenario.<sup>78</sup>
6. The fact that some area water right owners’ existing wells may have to be drilled deeper as a result of the City’s water use under the Proposal does not per se mean that those water rights will be legally impaired, as the Chief Engineer is permitted to decline to even initiate an impairment investigation until the water right owner alleging impairment provides particularized information about the allegedly impaired well.<sup>79</sup>
7. If impairment to an existing area water right does occur as a result of the City’s water use under the Proposal, DWR’s established impairment procedures will be used to target the specific well causing the impairment and remedy it.<sup>80</sup> DWR’s impairment procedures are intended to be applied after an impairment has been shown to exist, not to preemptively deny the application of water to beneficial use based on a speculative (and in this case unlikely) possibility of future impairment.<sup>81</sup> To apply existing impairment requirements in any other manner would discourage the application of water to beneficial use, which the Kansas Legislature has set forth as the public policy of the state.<sup>82</sup> Additionally, permit conditions that would further protect the interests of other area water users can be included in an order approving the Proposal.
8. The modeling work conducted by the City also shows that the City’s water use under the Proposal is unlikely to cause streamflow on the Little Arkansas River to drop below Minimum Desirable Streamflow (“MDS”) levels. In fact, during the 99 percent of the time that the area is not experiencing a one-percent drought, the Proposal will facilitate

---

<sup>74</sup>City’s Exhibit 1, Proposal, p. 2-16, table 2-9.

<sup>75</sup>See Approval of Application and Permit to Proceed in the matter of water right file number 46,627, issued by David W. Barfield, Chief Engineer, Kan. Dep’t of Agric., Div. of Water Res., September 18, 2009; Phase II Findings and Orders.

<sup>76</sup>See K.S.A. 82a-711.

<sup>77</sup>See *id.*

<sup>78</sup>City’s Exhibit 1, Proposal, p. 2-16.

<sup>79</sup>See K.A.R. 5-4-1.

<sup>80</sup>*Id.*

<sup>81</sup>*Id.*

<sup>82</sup>K.S.A. 82a-702.

the Little Arkansas River gaining water from the Aquifer, thus contributing to ensuring that MDS is met.<sup>83</sup>

9. Further, groundwater and surface water in the Little Arkansas River basin have not been shown to be interconnected to the extent that curtailing groundwater pumping in the basin would improve streamflow on the river, and the City's Phase II surface water intake right is required by its own permit to cease diversions well before MDS levels are reached.<sup>84</sup> Moreover, if groundwater rights in the Little Arkansas River basin were administered to restore MDS, all potentially impacting rights with a priority date after April 12, 1984 would be administered in order of priority, not just the City's Phase II recharge and recovery wells. Finally, DWR's MDS regulations, like those for impairment, are intended to be applied after it is shown that MDS is not being met, and the specific water rights that are causing MDS not to be met are to have their water use curtailed only as long as is necessary to restore MDS.<sup>85</sup>
10. K.A.R. 5-3-10, the DWR regulation that governs safe yield, applies to "...any new application to appropriate groundwater or surface water..."<sup>86</sup> As discussed above, the Proposal does not constitute a new application to appropriate groundwater or surface water. Further, K.A.R. 5-22-7 specifically exempts "an application for an aquifer storage and recovery well" located in the District from safe yield requirements.<sup>87</sup> Therefore, even if the Proposal did constitute an application for a new appropriation, the City's Project recharge and recovery wells would not be subject to safe yield requirements.
11. The City's modeling work shows that approximately 80 percent of the Aquifer's pre-development saturated thickness will be remaining at the end of a one-percent drought during which the City has used all of the water that the Proposal would allow it to.<sup>88</sup> Accordingly, even if some degree of error is present in the City's modeling, the Aquifer will remain mostly full even in a worst-case scenario.
12. A multi-year flex account ("MYFA") is not an adequate alternative to the Proposal. MYFAs are not a suitable tool for a large municipality due to the risk that a water user may run out of water in the last years of a MYFA and the associated public health and safety consequences posed by such a situation.<sup>89</sup> Additionally, a MYFA is not necessary to adequately monitor the City's water use under the Proposal—DWR impairment and MDS procedures already accomplish that.<sup>90</sup>

---

<sup>83</sup>Transcript, Volume XII, p. 3114, lines 1-6.

<sup>84</sup>Transcript, Volume VII, p. 1754, lines 8-25 and p. 1755, lines 1-8; *See* Approval of Application and Permit to Proceed for Water Right File number 46,627, issued by David W. Barfield, Chief Engineer, Kan. Dep't of Agric., Div. of Water Res., Sept. 18, 2009.

<sup>85</sup>*See* K.S.A. 82a-703; K.A.R. 5-15-1; K.A.R. 5-15-3.

<sup>86</sup>K.A.R. 5-3-10.

<sup>87</sup>K.A.R. 5-22-7.

<sup>88</sup>City's Exhibit 1, Proposal, p. 2-16.

<sup>89</sup>Transcript, Volume VII, p. 1798, lines 10-16.

<sup>90</sup>*See* K.A.R. 5-4-1.

13. In *Clawson*, the Kansas Court of Appeals held that the Chief Engineer, after issuing a permit for an appropriation water right, could not retain jurisdiction to later reduce the water right's authorized quantity or rate.<sup>91</sup> The facts of *Clawson* are not applicable to the Proposal—the Chief Engineer is not attempting to mandatorily reduce the quantity or rate of any water rights at issue, and the City has not requested that he do so.<sup>92</sup> None of the authorized quantities or rates of any Project water rights would be altered at all under the Proposal.<sup>93</sup>
14. DWR has not established a binding definition for the term “passive recharge.” Chief Engineer Pope expanding on the concept of passive recharge using an “i.e.” clause does not constitute a definition that was intended to bind future decision-makers, particularly when the existence of regulatory definitions for other similar terms clearly indicate that DWR did not intend to define passive recharge. Additionally, the recharge that is being proposed in relation to AMCs is demonstrably not passive. The Project recharge and recovery wells that would withdraw AMCs under the Proposal would continue to be governed by their existing authorized rate and quantity limits, and the City itself has proposed permit conditions that would tie the accumulation of AMCs to the Project infrastructure's existing capacity for physical recharge.<sup>94</sup> Moreover, the District's examples in support of its argument that AMCs as proposed would constitute passive recharge are not persuasive, as they all involve sources of water that are not connected to any existing Project infrastructure or from which the City does not even have the right to divert water in the first place.<sup>95</sup>
15. A water right is a usufruct right that grants the water right owner the right to apply water to beneficial use.<sup>96</sup> A water right does not constitute a right to own or otherwise control groundwater before it is applied to beneficial use.<sup>97</sup> The property rights of a water right owner are infringed upon when that water right is impaired, and the modeling work conducted by the City is evidence that impairment will not occur under the Proposal.<sup>98</sup> The City never entered into a contractual agreement that it would not pump recharge credits when the Aquifer's water table was below the currently-established minimum index levels—the Phase II Findings and Orders that it is currently seeking to have modified ordered it not to do so.<sup>99</sup> Additionally, there is no evidence that water quality will be negatively impacted as a result of the Proposal. Further, the Kansas Supreme Court has held that the private right of action provided for in K.S.A. 82a-716, rather than

---

<sup>91</sup>*Clawson v. State, Dep't of Agric., Div. of Water Res.*, 49 Kan. App. 2d 789, 799, 315 P.3d 896, 904 (2013).

<sup>92</sup>See generally, City's Exhibit 1, Proposal.

<sup>93</sup>See *id.*

<sup>94</sup>See City's Exhibit 1, Proposal, p. 3-6.

<sup>95</sup>See Transcript, Volume XV, p. 3657, lines 21-25; Transcript, Volume XV, p. 3658, lines 1-9. The City does not own water rights on El Dorado Reservoir, and neither Cheney Reservoir nor the Arkansas River are in any way connected to the existing Project infrastructure.

<sup>96</sup>*Williams v. City of Wichita*, 190 Kan. 317, 339, 374 P.2d 578, 595 (1962).

<sup>97</sup>*Id.*

<sup>98</sup>See City's Exhibit 1, Proposal, p. 2-16 (impairment is unlikely to occur with the Aquifer 80 percent full).

<sup>99</sup>*Memorandum of Understanding* between Equus Beds Groundwater Management District No. 2 and the City of Wichita, Kansas regarding Wichita's Proposed Aquifer Storage and Recovery Project, Phase II (“Phase II MOU”), Dec. 3, 2008, p. 3, para. 6; Phase II Findings and Orders.

a Takings Clause action, is the appropriate remedy for an individual who has been damaged by the operation of a permitted water right.<sup>100</sup>

16. The KWAA mandates the application of the prior appropriation doctrine only when water supply is insufficient to satisfy all users, or when an impairment is occurring.<sup>101</sup> The modeling work conducted by the City shows that impairment is unlikely to occur under the Proposal.<sup>102</sup>
17. Even if these proceedings had not been delayed due to the COVID-19 pandemic, they would not have been concluded until more than two years after the City initially submitted the Proposal.<sup>103</sup> Additionally, all parties were allowed ample opportunity for discovery, as well as to present their cases and respond to the opposing parties' arguments.<sup>104</sup> Extra measures to accommodate the same were taken in light of the pandemic.<sup>105</sup> Measures were also taken to accommodate public access to the proceedings, both before and after the outbreak of COVID-19 in Kansas.<sup>106</sup> Further, an extensive record of these proceedings has been created, and any party who does not agree with the final order of the Chief Engineer will be entitled to request further review of the order pursuant to the Kansas Judicial Review Act.<sup>107</sup>
18. As set forth above, the District's arguments regarding the applicability of K.S.A. 82a-709, K.S.A. 82a-708b, and the *Clawson* holding are incorrect. Additionally, the City is not seeking an advisory opinion from the Chief Engineer—it is asking him to modify permit conditions that govern the operation of the Project.<sup>108</sup>

e. Aquifer Storage and Recovery Regulations

K.A.R. 5-12-1 through K.A.R. 5-12-4 govern aquifer storage and recovery projects. Most of those regulations are not directly applicable to the Proposal. Factual findings relevant to such inapplicable aquifer storage and recovery system regulations are as follows:

1. K.A.R. 5-12-1 speaks to applications to appropriate water as part of an aquifer storage and recovery system.<sup>109</sup> As set forth above, the Proposal does not constitute an application to appropriate water.<sup>110</sup>

---

<sup>100</sup>*Williams* at 341.

<sup>101</sup>K.S.A. 82a-707.

<sup>102</sup>See City's Exhibit 1, Proposal, p. 2-16.

<sup>103</sup>See City's Exhibit 1, Proposal (submitted in March 2018).

<sup>104</sup>See, e.g., Order Extending Deadline for Expert Reports, Feb. 15, 2019; Order Extending Deadline for Depositions, Feb. 15, 2019.

<sup>105</sup>See, e.g., Agreed Waiver of K.A.R. 5-12-3, Dec. 30, 2020 (allowing the remainder of the proceedings to be conducted virtually following the outbreak of COVID-19).

<sup>106</sup>See, e.g., Notice of Continuation of Hearing, Jan. 9, 2020 (stating that the formal phase public hearing was open to the public, inviting the public to submit written comments regarding the Proposal, and providing the website where more information regarding the Proposal could be found).

<sup>107</sup>See K.S.A. 77-601, *et. seq.*

<sup>108</sup>See Phase II Findings and Orders; City's Exhibit 1, Proposal.

<sup>109</sup>See K.A.R. 5-12-1.

<sup>110</sup>See generally Phase II Findings and Orders; City's Exhibit 1, Proposal.

2. K.A.R. 5-12-3 pertains to the location of hearings held related to aquifer storage and recovery projects.<sup>111</sup> That regulation has been complied with in this matter and is not directly relevant to analyzing the Proposal.<sup>112</sup>
3. K.A.R. 5-12-4 pertains to a groundwater management district's authority to recommend rules and regulations related to aquifer storage and recovery monitoring and accounting requirements.<sup>113</sup> This regulation is also not directly applicable to the Proposal, as no rules and regulations are at issue here.

f. Applicable Standards

As set forth herein, the District and the Intervenors have asserted numerous standards that do not actually apply to the Proposal. The standards that do properly apply and factual findings relevant to those standards are as follows:

1. K.A.R. 5-1-1, which sets forth definitions relevant to aquifer storage and recovery systems, provides that “minimum index level” means 20 feet above the bedrock elevation or an alternatively proposed minimum elevation for storage within a basin storage area...” The City has proposed definitive minimum index levels for each index cell within the Basin Storage Area (“BSA”) and all such proposed levels are more than 20 feet above the Aquifer’s bedrock elevation.<sup>114</sup>
2. K.A.R. 5-1-1 also provides that “recharge credit” means “the quantity of water that is stored in the basin storage area and that is available for subsequent appropriation for beneficial use by the operator of the aquifer storage and recovery system.”<sup>115</sup> The water that the City would withdraw from the BSA based on its accumulation of AMCs under the Proposal would be stored in the BSA. Physical injection of the water into the BSA is not per se necessary in order for it to be considered stored there. AMCs would be available for subsequent appropriation because the volume of water the City would be permitted to withdraw based on its accumulation of AMCs would continue to be limited by the annual authorized quantity of each Project recharge and recovery well. Finally, the City is the operator of the Project.<sup>116</sup>
3. As discussed above, the Phase I Findings and Orders required that any proposed change in the Project’s recharge credit accounting method improve the existing accounting method and be adequate to allow the City to comply with K.A.R. 5-12-2(a) and (b), which governs aquifer storage and recovery accounting reports.<sup>117</sup> K.A.R. 5-12-2(a) provides that an aquifer storage and recovery system permit-holder is required to file an

---

<sup>111</sup>See K.A.R. 5-12-3.

<sup>112</sup>See, e.g., Agreed Waiver of K.A.R. 5-12-3.

<sup>113</sup>See K.A.R. 5-12-4.

<sup>114</sup>City’s Exhibit 1, Proposal, p. 2-25, table 2-11.

<sup>115</sup>K.A.R. 5-1-1.

<sup>116</sup>See Phase I Findings and Orders; Phase II Findings and Orders.

<sup>117</sup>Phase I Findings and Orders, p. 12, para. 16.

annual accounting report that accounts for all water entering and leaving the basin storage area and specifically computes the amount of recharge credits held in the basin storage area.<sup>118</sup> K.A.R. 5-12-2(b) provides that the annual accounting report shall “address the items in the water balance for the basin storage area” and lists eight items that the report “may” include.<sup>119</sup> K.A.R. 5-1-1(0000) provides that “water balance” means “the method of determining the amount of water in storage in a basin storage area by accounting for inflow to, outflow from, and changes in storage in that basin storage area.”<sup>120</sup>

4. The accounting method that the City has proposed to track its accumulation of AMCs would improve the existing accounting method used to track physical recharge credits because it greatly simplifies the current method, which requires multiple modeling runs and detailed analyses and is fundamentally ill-suited to tracking AMCs.<sup>121</sup> The Proposal sets forth in detail how the City proposes to account for inflow, outflow, and changes within the BSA and ultimately arrive at the amount of recharge credits that are available to the City.<sup>122</sup> The City’s accounting report is not required to include the things that “may” be included in an accounting report pursuant to K.A.R. 5-12-2(b).

### **Conclusions of Law**

1. K.S.A. 82a-709 does not apply to the Proposal, and the fact that the City did not submit an application for a new appropriation right pursuant to that statute is not fatal to the Proposal.
2. The City is permitted to increase its consumptive use under its existing Project water rights. The fact that the Proposal may result in the City increasing the consumptive use of some Project water rights is not fatal to the Proposal.
3. The uses the City would make of its water under the Proposal would be permissible.
4. K.S.A. 82a-708b does not strictly apply to the Proposal because the City is not proposing a true “change” to any of its water rights as that term is used in K.S.A. 82a-708b, but the Proposal and the City’s modeling nonetheless satisfy the requirements of K.S.A. 82a-708b that the Proposal be reasonable, not impair existing water rights, and relate to the same local source of supply as the City’s Project water rights currently utilize.
5. The Proposal should not be denied because of a speculative and unlikely possibility of future impairment to as of yet unidentified existing area water rights.
6. The Proposal should not be denied because of speculative future impact to MDS on the Little Arkansas River.

---

<sup>118</sup>K.A.R. 5-12-2.

<sup>119</sup>*Id.*

<sup>120</sup>K.A.R. 5-1-1.

<sup>121</sup>*See* City’s Exhibit 1, Proposal, p. 4-1.

<sup>122</sup>*Id.* at 4-1 through 4-3.

7. The Proposal is not subject to safe yield requirements and should not be dismissed due to safe yield considerations.
8. The Proposal should not be dismissed due to saturated thickness concerns.
9. The Proposal should not be dismissed in favor of forcing the City to enter a MYFA or other term permit rather than pursuing modifications to the Project.
10. The *Clawson* holding does not apply to the Proposal and does not necessitate its dismissal.
11. The method by which the City has proposed to accumulate AMCs would not constitute prohibited passive recharge.
12. The City's water use under the Proposal would not violate the Takings Clause of the United States Constitution or the Kansas Constitution, and the proper remedy for an individual who is damaged by the City's water use under the Proposal is the private right of action provided for in K.S.A. 82a-716, rather than a Takings Clause action.
13. The City's water use under the Proposal would not violate the doctrine of prior appropriation and would not otherwise contravene the KWAA or Kansas public policy.
14. These proceedings have not violated the Procedural Due Process rights of the District or any other party.
15. K.A.R. 5-12-1 through K.A.R. 5-12-4 do not apply to the Proposal. The lowered minimum index levels that the City has proposed are required to comport with the definition for "minimum index level" set forth in K.A.R. 5-1-1, and the concept of Aquifer Maintenance Credits ("AMCs") as proposed are required to meet the definition of "recharge credit" provided in the same regulation.
16. The minimum index levels the City has proposed comport with the definition for "minimum index level" set forth in K.A.R. 5-1-1, and AMCs as proposed would constitute "recharge credits" as that term is defined in K.A.R. 5-1-1.
17. The City's proposed AMC accounting method comports with the requirements contained in the Phase I Findings and Orders that any proposed change in the Project's recharge credit accounting method improve the existing accounting method and be adequate to allow the City to comply with K.A.R. 5-12-2(a) and (b).
18. The Proposal is otherwise reasonable and in the public interest and should be approved subject to the permit conditions set out herein.

**IT IS, THEREFORE,** the recommendation of the Presiding Officer that the Chief Engineer approve the Proposal subject to the following permit conditions:

1. The City shall continue to physically recharge the BSA through injection when the Aquifer's water table is below the established maximum index level;
2. The rate of accrual of all recharge credits shall not exceed the constructed physical diversion capacity of the Project's infrastructure or the authorized rate of diversion and annual authorized quantity of Water Right No. 46,627;
3. The Project's Phase I recharge and recovery wells shall not be permitted to generate AMCs;
4. The amount of water that the City is entitled to withdraw from the BSA based on its accumulation of physical recharge credits and AMCs combined shall not exceed 120,000 acre-feet at any given time;
5. The City shall not be entitled to withdraw more than 19,000 acre-feet of water annually based on its total recharge credit accumulation;
6. The City shall calculate the AMCs it accumulates using an alternative or modified accounting process that is different from the accounting used to track physical recharge credits;
7. AMCs shall be accumulated based on the metered quantity of water diverted from the Little Arkansas River via direct surface water diversions or water captured via bank storage wells and sent directly to the City;
8. The City shall adopt the accounting process set out in the Proposal, or an alternative similarly straight-forward spreadsheet accounting process, to track its accumulation and use of AMCs.
9. The City shall utilize pumping rotation if conflicts arise between a Project recharge and recovery well and the well of another water right owner located within 660 feet of the Project well.

**IT IS SO ORDERED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_.**

---

Constance C. Owen  
Presiding Officer

Respectfully submitted:

/s/Stephanie A. Murray  
Stephanie A. Murray  
1320 Research Park Drive  
Manhattan, Kansas 66502  
TEL: (785) 564-6715  
FAX: (785) 564-6777  
stephanie.murray@ks.gov  
*Attorney for KDA-DWR*

## CERTIFICATE OF SERVICE

I certify that on this 30th day of July 2021, the above *Proposed Findings of Fact and Conclusions of Law of DWR* was electronically filed with the Presiding Officer for this matter and that copies were sent via e-mail to the following:

**Presiding Officer**

Constance C. Owen  
connieowen@everestkc.net

**City of Wichita**

Department of Public Works & Utilities  
455 North Main Street  
Wichita, KS 67202  
bmcleod@wichita.gov

**Equus Beds Groundwater Management District No. 2**

313 Spruce  
Halstead, KS 67056  
tboese@gmd2.org  
tom@aplawpa.com  
stucky.dave@gmail.com

**Intervenors**

1010 Chestnut  
Halstead, KS 67056  
twendling@mac.com

/s/Stephanie A. Murray  
Stephanie A. Murray, S. Ct. #27635