BEFORE THE WATER TRANSFER HEARING PANEL STATE OF KANSAS

IN THE MATTER OF THE APPLICATION OF)	
THE CITIES OF HAYS, KANSAS AND)	
AND RUSSELL, KANSAS FOR APPROVAL)	OAH Case No. 23AG0003 AG
TO TRANSFER WATER FROM EDWARDS)	
COUNTY PURSUANT TO THE KANSAS)	
WATER TRANSFER ACT)	
)	

CITIES' MEMORANDUM IN SUPPORT OF THE WATER TRANSFER

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I. Introduction.

The evidence in this Water Transfer Proceeding is monumental and comprehensive. Over the course of a nine-day evidentiary hearing, the Presiding Officer, Matthew A. Spurgin, an Administrative Law Judge from the Kansas Office of Administrative Hearings, admitted into evidence more than 2,900 separate exhibits spanning more than 100,000 pages. The hearing resulted in a 1,556-page transcript with live testimony from 21 witnesses, including 11 experts. In addition to the experts' live testimony, the Presiding Officer required written "pre-filed" direct and rebuttal testimony, which comprised just under 1,100 pages of written testimony, reports, and exhibits.

Additionally, as "commenting agencies," the Kansas Water Authority, the Kansas Department of Health and Environment ("KDHE"), the Kansas Water Office ("KWO"), and the Kansas Department of Agriculture-Division of Water Resources ("DWR") submitted written comments.

After the formal portion of the Hearing, the Cities and the Intervenors submitted Proposed Findings of Fact and Conclusions of Law. Each of the Cities' Proposed Findings of Fact included

at least one, and sometimes several, citations to the record. Intervenors' Proposed Findings and Conclusions were not as exhaustively cited. Both Parties submitted response briefs, and Intervenors filed an 11-page response to DWR's comments.

On February 5, 2024, the Presiding Officer issued an 81-page, single-spaced Initial Order setting out his Findings of Fact and Conclusions of Law, concluding that "[t]he evidence on the record is sufficient, substantial, competent, and credible to establish the Cities' application to transfer water provides benefits to the State of Kansas as a whole and that the benefits for approving the transfer outweigh the benefits of denying the transfer." (Initial Order ("I.O") at 74, ¶ 39.) Consequently, the Presiding Officer continued, "Accordingly, the Application to transfer water from Edwards County to Hays and Russell is approved in accordance with the conditions and limitations placed on such transfer by the Chief Engineer in the Master Order...." (Id.)

The Initial Order is among the most thorough and comprehensive administrative or judicial rulings ever reviewed by any of the Cities' lawyers. It includes 282 separate paragraphs of Findings of Fact—including 65 subparagraphs—spanning 47 single-spaced pages. And practically every stated fact includes at least one citation to the evidentiary record; many have multiple citations. (*See, e.g.*, I.O. at 17–18, ¶ 14 (7 record citations); *id.* at 19, ¶ 22 (5 record citations); *id.* at 29, ¶ 89 (5 record citations).)

The Initial Order is in full compliance with K.S.A. 77-526(c). It includes concise and explicit statements of the facts based exclusively upon the evidence in the record with citations, conclusions of law, and policy reasons for the decision. The Cities respectfully urge the Panel to adopt the Initial Order in its entirety.¹

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¹ Subject to a few non-substantive corrections as detailed in Section IX.

II. Designation of the record.

Pursuant to K.S.A. 77-527(d), the Cities designate all materials cited in the Initial Order, in this Brief, and in the Cities' Proposed Findings of Fact and Conclusions of Law, as portions of the record to be considered by the Water Transfer Panel.

III. Due regard should be given to the Presiding Officer's Findings of Fact and Conclusions of Law.

The Water Transfer Hearing Panel is the Kansas Administrative Procedure Act ("KAPA"), K.S.A. 77-501, et seq., "agency head" and must "review all initial orders ... in accordance with [KAPA]." K.S.A. 82a-1504(b). As such, the Panel exercises de novo review of the Presiding Officer's Initial Order. K.S.A. 77-527(d). During its review, the Panel must "give due regard to the presiding officer's opportunity to observe the witnesses and to determine the credibility of witnesses." K.S.A. 77-527(d). As stated by our Supreme Court, "the ability to observe the declarant is an important factor in determining whether he or she is being truthful." State v. Scaife, 286 Kan. 614, 624, 186 P.3d 755 (2008). If the Panel "does not agree with those credibility determinations, the agency should give its reasons for disagreeing." Wiehe v. Kissick Constr. Co., 43 Kan. App. 2d 732, 741, 232 P.3d 866 (2010). Moreover, KAPA requires the Panel to identify any differences between its Final Order and the Initial Order and must "state the facts of record which support any difference in findings of fact, state the source of law which supports any difference in legal conclusions, and state the policy reasons which support any difference in the exercise of discretion." K.S.A. 77-527(h).

The Presiding Officer was physically present and conducted a public comment hearing in Hays on June 20, 2023, and an evidentiary hearing beginning on July 19, 2023. He vigilantly oversaw the entire hearing, the admission of the evidence, the pre-filed expert testimony, the live

testimony of all witnesses, the filings by the commenting agencies, and the extensive post-hearing briefing.

The evidentiary record is clearly expansive, and, to his utmost credit, the Presiding Officer synthesized that record into cogent Findings of Fact and Conclusions of Law compliant with both KAPA and the Water Transfer Act ("WTA"), K.S.A. 82a-1501, *et seq*.

IV. The Presiding Officer found that the Cities need a drought-resistant source of additional water for municipal use and the R9 Ranch is their only reasonable alternative.

The Cities of Hays and Russell need a new source of municipal water. (I.O. at 22, ¶¶ 36–38; *id.* at 23–26, ¶¶ 44–60; *id.* at 66–71; *id.* at 27–32, ¶¶ 77–116. *See also* Sections IV.,VIII.C.3., and VIII.G., addressing the Cities' needs, the environmental and public health and welfare benefits, and the Cities' extensive conservation efforts and rate ordinances.)

The Presiding Officer concluded:

- "Sufficient evidence was presented to establish that the Cities' current water supply sources are at risk during drought periods and limit the Cities' ability to develop retail or commercial growth and to attract additional population growth." (I.O. at 33, ¶ 123.)
- "Sufficient evidence has been presented to establish the Cities existing water sources are vulnerable and unlikely to facilitate further significant growth without securing additional water supplies." (I.O. at 67, ¶ 5.)

The Cities presented uncontroverted evidence (I.O. at 32–33, ¶¶ 117 and 121) that future droughts will negatively impact their current sources (I.O. at 28–30, ¶¶ 87–98; id. at 32, ¶¶ 114–116; id. at 33, ¶¶ 118–120; id. at 46–47, ¶ 224; id. at 67, ¶ 3).

As discussed in Section VII.D., the Cities have searched far and wide for viable sources of water, and the R9 Ranch is the best and only alternative that will provide the Cities with a long-term, sustainable, drought-resistant source of municipal water. "The Presiding Officer finds that the Cities have pursued alternative sources of water and concluded that the *transfer of water from*

the R9 Ranch is the best course of action for them to pursue to secure a drought resistant water source." (I.O. at 71, ¶ 24 (emphasis added).)

The WTA permits approval of a smaller quantity of water than requested, *but only* to protect the public interest of the State as a whole. (K.S.A. 82a-1504(a); I.O. at 74, ¶¶ 37–38.) While they disagreed with the Cities' projected needs, "the Intervenors did not offer any persuasive evidence or authority to justify why the Presiding Officer should grant approval of a lesser quantity in this water transfer case." (I.O. at 74, ¶ 38.) Indeed, the Presiding Officer specifically requested the Parties to provide authority that would allow approval of a smaller quantity than requested. (I.O. at 74, ¶ 37.) But "[t]he Intervenors did not indicate a basis upon which the Presiding Officer should approve a transfer for a reduced quantity." (Id.)

V. The Initial Order is based on valid Conclusions of Law that support approval of the transfer.

Because of the highly technical and complex nature of this transfer proceeding, and the numerous factual and legal issues involved, the Initial Order includes many findings and conclusions that are mixed findings of fact and conclusions of law. The same is true in the following sections of this brief. For that and other reasons, the following is not intended as a comprehensive list of the Presiding Officer's Conclusions of Law:

- The WTA applies only because of the quantity of water and distance of the transfer involved. (I.O. at 66, ¶ 1; id. at 68, ¶ 15.)
- In light of the record as a whole, the range of population growth rates identified in this proceeding are all within a reasonable range of what could happen. (I.O. at 67, ¶ 4.)
- After factoring in the consumptive use limitations, the TYRA Limitation, and the reasonable needs limitations, the maximum water usage permitted by the Master Order is much less than if the R9 Water Rights were used for irrigation. (I.O. at 69, ¶¶ 16–17.)
- The Presiding Officer stated: "Regardless of whether the decline was 2.4 feet, 2.6 feet, or 2.8 feet, the few inches difference is minimal where the saturated thickness is an average of 100 feet and up to 140 feet." (I.O. at 62, note 77.)

- A change in the water level near the R9 Ranch will be minimal even using the methodology proposed by the Intervenors' expert for a worst-case scenario and, even then, is not "beyond a reasonable economic limit." (I.O. at 69, ¶ 18.)
- Because GMD5 is closed to new appropriations, the R9 Water Rights are not subject to abandonment, and the water authorized for irrigation use under the R9 Water Rights is not available for anyone else to acquire. (I.O. at 68, ¶ 12.)
- The WTA permits approval of a smaller quantity of water than requested but only as necessary to protect the public interest of the State as a whole. K.S.A. 82a-1504(a). (I.O. at 74, ¶¶ 37–38.)²
- The proposed water transfer meets the applicable requirements of the GMD5 Management Program. (I.O. at 72, ¶ 28.)
- Balancing the benefits of approval and denial is only required if approval will reduce the quantity of water "required" to meet the reasonable future needs of other beneficial users. No other user can acquire the water appropriated under the R9 Water Rights. (I.O. at 72, ¶ 29.)
- The "anti-speculation" doctrine does not apply and is not an impediment to approval of the transfer. (I.O. at 72-73, ¶¶ 30-35.)
- The evidence in the record is sufficient, substantial, competent, and credible to establish that the Cities' application to transfer water provides benefits to the State of Kansas as a whole and that the benefits for approving the transfer outweigh the benefits of denying the transfer. (I.O. at 74, ¶ 39.)

VI. The Initial Order is thoroughly buttressed by the well-established factual record and demonstrates that each of the WTA requirements have been satisfied and supports approval of the transfer.

The WTA includes a few requirements and several factors to consider when deciding whether to approve a water transfer application. Under K.S.A. 82a-1502(b), water transfers that do not comply with the following threshold "conditions" cannot be approved:

- A transfer cannot impair water reservation rights, vested rights, appropriation rights or prior applications.
- Applicants must have adopted and implemented conservation plans and practices that are consistent with KWO guidelines at least 12 consecutive months immediately before filing of the transfer application.

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² "However, it must be recognized that the Master Order ... already implemented conditions and limitations to the authorized quantity" (I.O. at 74, ¶ 38.).

• Because the Cities operate public water supply systems, they must have rate structures that encourage the efficient use of water and, if designed, implemented and maintained properly, will result in the wise use and responsible conservation and management of water.

K.S.A. 82a-1502(b)(1)–1502(b)(2)(C).

As discussed below—and in the Presiding Officer's Initial Order—the Cities presented extensive evidence demonstrating full compliance with each of these conditions, much of which is uncontroverted.

In addition to these threshold requirements, the WTA requires a finding that the "benefits to the state for approving the transfer outweigh the benefits to the state for not approving the transfer" if, *but only if*, the proposed transfer "would reduce the amount of water required to meet the present or any reasonably foreseeable future beneficial use of water by present or future users in the area from which the water is to be taken." K.S.A. 82a-1502(a)(1). This showing is not required here because the uncontroverted evidence shows, and the Presiding Officer found, that the Cities are the only reasonably foreseeable present or future users of the water because they already own the R9 Water Rights. (I.O. at 42, ¶ 192 (testimony of Lane Letourneau concluding same); *id.* at 60, ¶ 288.a and b. (DWR comment concluding same); *id.* at 70, ¶ 22 (Presiding Officer concluding same).)

The statute goes on to provide that *if* the proposed transfer would cause such a reduction of water, the application may still be approved provided that "the panel determines that the benefits to the state for approving the transfer outweigh the benefits to the state for not approving the transfer." K.S.A. 82a-1502(a)(1).³ In that event, the statute provides a list of factors to be used to evaluate the statewide benefits comparison, all of which were exhaustively addressed via evidence

³ K.S.A. 82a-1502(a) permits the approvals of a transfer for up to one year when the Panel or the Governor determines that there is an emergency that affects the public health, safety, or welfare. These provisions are not applicable, at least for now.

presented by the Cities and thoroughly discussed by the Presiding Officer in his Initial Order. (*See* Sections VII. A–I below.) Specifically, these factors are set forth in K.S.A. 82a-1502(c)(1)–(9) as follows:

- (1) Any current beneficial use being made of the water proposed to be diverted, including minimum desirable streamflow requirements;
- (2) any reasonably foreseeable future beneficial use of the water;
- (3) the economic, environmental, public health and welfare and other impacts of approving or denying the transfer of the water;
- (4) alternative sources of water available to the applicant and present or future users for any beneficial use;
- (5) whether the applicant has taken all appropriate measures to preserve the quality and remediate any contamination of water currently available for use by the applicant;
- (6) the proposed plan of design, construction and operation of any works or facilities used in conjunction with carrying the water from the point of diversion, which plan shall be in sufficient detail to enable all parties to understand the impacts of the proposed water transfer;
- (7) the effectiveness of conservation plans and practices adopted and implemented by the applicant and any other entities to be supplied water by the applicant;
- (8) the conservation plans and practices adopted and implemented by any persons protesting or potentially affected by the proposed transfer, which plans and practices shall be consistent with the guidelines for conservation plans and practices developed and maintained by the Kansas water office pursuant to K.S.A. 74-2608, and amendments thereto; and
- (9) any applicable management program, standards, policies and rules and regulations of a groundwater management district.

Even though the Cities were not required to show that the statewide benefits comparison weighs in favor of granting the transfer, they nevertheless presented substantial credible evidence that, in fact, the benefits to the State for approving the transfer far outweigh the benefits to the State for not approving the transfer. And the Presiding Officer concluded that the Cities had decisively shown that the statewide benefits weigh in favor of granting the Transfer Application.

To aid the Panel's review of the Initial Order, this brief is organized to track the WTA factors.

VII. K.S.A. 82a-1502(a)(1) – The benefits to the State for approving the transfer outweigh the benefits to the State for denying the transfer.

As noted above, K.S.A. 82a-1502(c) provides a list of 9 factors to be addressed when evaluating whether the benefits to the State for approving a water transfer outweigh the benefits to the State for denying a water transfer. The Cities presented substantial, competent, and credible evidence that each of the factors weighs in favor of granting the transfer. And the Presiding Officer addressed each factor and the related evidence presented by all Parties in his Initial Order. (*See, e.g.*, I.O. at 65, ¶¶ 20 and 22.) Each factor is addressed in turn below.

A. K.S.A. 82a-1502(c)(1) – Any current beneficial use being made of the water proposed to be transferred, including minimum desirable streamflow requirements.

The KWAA states that water appropriation rights are appurtenant to the land where water is used and are subject to the control of the owners of that land. K.S.A. 82a-701(g); K.S.A. 82a-708a(a).

1. The irrigation wells on the Ranch have been plugged so no current beneficial use is being made of the water proposed to be transferred.

The Initial Order sets out the following facts and conclusions:

- ◆ The Cities own the R9 Ranch. (I.O. at 15, ¶ 1; *id.* at 16, ¶ 4; *id.* at 17, ¶¶ 11 and 13–14; *id.* at 39, ¶ 170; *id.* at 57, ¶ 281; *id.* at 68, ¶ 12. *See also* Ex. 1286 (1994 Agreement to purchase the R9 Ranch); Ex. 830 (Warranty Deed conveying the Ranch to Hays); Ex. 20 (agreement to sell an interest in the Ranch to Russell); and Ex. 831 (Warranty Deed conveying an undivided interest in the Ranch to Russell).)
- ◆ The R9 Water Rights are perfected water appropriation rights. (I.O. at 17, ¶ 12; *id.* at 60, ¶ b.i.1.; *id.* at 73, ¶ 33. See also DWR files for each of the R9 Water Rights are found at Exs. 951–980; Ex. A, attached, for citations to the record for each of the Change Applications and the amendments The original change applications describe the characteristics of each of the R9 Water Rights.)

- The R9 Water Rights are appurtenant to the R9 Ranch. 4 (I.O. at 16, $\P\P$ 4–5; *id.* at 18, \P 18.)
- ◆ The Cities own and control the R9 Water Rights. (I.O. at 70, ¶ 22.)
- ♦ The Cities are the only Parties with the right to divert water from the R9 Water Rights. (I.O. at 42, ¶ 192; id. at 61, ¶ ii; id. at 68, ¶ 12; id. at 70, ¶ 22; id. at 73, ¶ 34.)
- ◆ Irrigation is the only current beneficial use authorized by the R9 Water Rights. 5 (I.O. at 18, ¶ 18; *id.* at 39, ¶ 172; *id.* at 70, ¶ 22.)
- ♦ All but two of the irrigation wells on the R9 Ranch have been plugged. (I.O. at 39, ¶ 172. See also Exs. 2363 and 2397 describing the plugging of the irrigation wells. See also, the Cities Proposed Findings and Conclusions, ¶¶ 1–14.)
- ♦ The R9 Ranch has not been used as irrigated farmland since 2017. (I.O. at 39, ¶ 171.)

Because the Cities own the R9 Water Rights, and because the R9 Ranch wells have been plugged and are not being put to use, approval of the transfer will not reduce the quantity of water required to meet the present or future beneficial use by present users.

2. Each of the R9 Water Rights has a priority date that is senior to the minimum desirable streamflow requirements.

The Initial Order sets out the following uncontroverted facts:

- ◆ Priority dates for the R9 Water Rights range from January 2, 1974 (Ex. 1-5 at Cities 0000442.) to July 1, 1977 (Ex. 1-36 at Cities 0002450; I.O. at 39, ¶¶ 173-174.)
- ♦ The KWAA only imposes minimum desirable streamflow requirements on water rights with priority dates *after* April 12, 1984. (I.O. at 63, ¶ 8 (citing K.S.A. 82a-703b(a).)

MDS requirements are not an impediment to approval of the transfer because none of the R9 Water Rights have a priority date after April 12, 1984.

B. K.S.A. 82a-1502(c)(2) — Because the Cities own and control the R9 Water Rights, they are the only reasonably foreseeable future beneficial users of the water.

The Initial Order sets out the following uncontroverted facts and conclusions:

• The R9 Ranch is located in GMD5. (I.O. at 17, \P 9; *id.* at 39, \P 177.)

⁴ The changes approved in the Master Order are contingent approval of the water transfer and a written construction contract to drill one or more of the 14 proposed municipal wells (excluding test drilling). (Ex. 1-2 at Cities 0000154, ¶ 253.)

⁵ *Id*.

- ♦ GMD5 is closed to new appropriations of water so the R9 Water Rights are not subject to abandonment. (I.O. at 42, ¶ 192; *id.* at 61, ¶ iii; *id.* at 63, ¶ 6; *id.* at 68, ¶ 12; *id.* at 70, ¶ 22; *id.* at 72, ¶ 29; *id.* at 73, ¶ 34.)
- ♦ Because the Cities own and control the R9 Water Rights they are the only reasonably foreseeable future users of the R9 Water Rights. (I.O. at 39, ¶ 176; *id.* at 42, ¶ 192; *id.* at 70, ¶ 22. See also Letourneau Test., Tr. Vol. 4 at 897:19–899:16.)

See also, the Cities' Proposed Findings and Conclusions, ¶¶ 9, 638, 692, 767, 831–832, 846, and citations to the record.

C. K.S.A. 82a-1502(c)(3) – The economic, environmental, public health and welfare, and other impacts of approving or denying the transfer.

The Initial Order addressed the Parties' contentions, expert opinions, and proffered evidence relating to the economic, environmental, public health and welfare, and other impacts of approving or denying the transfer and correctly concluded that: "The Intervenors have not credibly established sufficient negative impacts (economic, environmental, or health and welfare) to the state as a whole if the application was approved." (I.O. at 70–71, ¶¶ 23.c.) Conversely, the Presiding Officer concluded that the Cities had presented "sufficient, substantial, competent and credible evidence" establishing that the statewide impacts far-and-away favor approving the transfer for a multitude of reasons. (*See, e.g.*, I.O. at 71, ¶¶ 23.f, g, and h.)

1. Approval of the transfer will result in substantial economic benefits to the State of Kansas.

The economic impacts of the water transfer were addressed extensively by both the Cities and Intervenors. The Cities' Proposed Findings of Fact included 227 separately numbered paragraphs of proposed facts including comprehensive citations to the record on this topic (¶¶ 235–462.) Likewise, the Initial Order devoted extensive space, with record citations to this issue, including:

- The Cities presented "testimony, data, and expert opinions addressing how Hays, Russell, the region, and the State of Kansas could benefit economically if the transfer application was approved giving Hays and Russell access to additional water from a source less vulnerable to droughts." (I.O. at 22, ¶ 39.)
- The Cities "offered credible evidence addressing their available water supplies, and how those water supplies are affected during times of drought...." (I.O. at 26, ¶ 71.)
- Hays is the keystone of a \$2 billion regional economy and "every dollar of sales tax and income tax and commerce that's generated in the Cities of Hays and Russell benefits the State of Kansas." (I.O. at 45, ¶ 210. See also id. at ¶ 211 (same) and ¶ 212 (addressing the value of publicly owned and leased property in Ellis County (\$237,172,060) and Russell County (\$49,812,310).)
- The Cities presented credible evidence that previous droughts had stunted growth in Hays and Russell, that availability of water is a key component in population growth, and that economic growth in the Cities benefits Kansas as a whole because, when the Cities are thriving, the State benefits from added tax revenues. (I.O. at 26, ¶ 70. See also id. at 45, ¶ 213.)

Dr. Stephen F. Hamilton was the Cities' principal expert addressing the economic impacts of the water transfer. The Presiding Officer discussed and referenced Dr. Hamilton's testimony and opinions at length in the Initial Order. (*See, e.g.*, I.O. at 25–26, ¶¶ 68–69; *id.* at 76, 85, and 218–32.) Dr. Hamilton's work "addresses water valuation," and other topics pertinent to the economic impacts of water shortages. (I.O. at 46, ¶¶ 219–20.) His analysis addresses both: (1) the statewide economic benefits if the water transfer is approved "due to investments in water infrastructure," and (2) the "economic impacts for the Cities caused by drought-induced water shortages" if the water transfer is denied and the Cities are forced to rely exclusively on their existing drought-susceptible sources. (I.O. at 46, ¶ 221.)

Dr. Hamilton utilized the "IMPLAN model" to measure the statewide economic impacts of the construction project, (I.O. at 46, ¶ 223), and concluded that the project "would produce statewide economic impact of \$167 million as well as 752 full time jobs and state tax revenue impact of \$4.4 million." (I.O. at 47, ¶ 226.c. *See also id.* beginning at 47, ¶¶ 227–29 (addressing additional details relating to the construction project).) More specifically, this includes \$112.2

million of direct impact, \$32.2 million of indirect impact, and \$22.5 million of induced impact." (I.O. at 47, ¶ 227.)

Dr. Hamilton further opined that the 752 additional full-time equivalent jobs will generate "average earnings of \$53,881 per year, which is higher than the average salary estimated for Kansas by the Bureau of Labor Statistics." (I.O. at 48, ¶ 228.) Consequently, Dr. Hamilton concluded that "approving the water transfer would have a positive impact on the Kansas economy from the conveyance infrastructure alone." (I.O. at 48, ¶ 229.)

In sum, the Presiding Officer concluded:

Economic benefits involved include expansion of existing businesses, attraction of new businesses, and the construction of new homes, all of which are likely impacted by the pending transfer application. Population growth is clearly dependent upon economic growth, availability of jobs, businesses, housing, and services such as medical services. Additionally, approval of the transfer would come with the economic impact associated with the construction of the infrastructure necessary to transport water from the R9 Ranch to Hays and Russell. And for the area around the R9 Ranch in Edwards County, there may be some economic benefit as well associated with the construction. Sufficient, substantial, competent, and credible evidence was presented to establish revenue and wages earned by workers associated with the construction of the required infrastructure would have a positive economic impact to both local governments as well as tax revenue for the state as a whole.

(I.O. at 70, \P 23.b.)

Moreover, there was testimony during the hearing that Russell's largest employer, Purefield Ingredients, plans to invest in a \$300 million expansion to its facility in Russell. (I.O. at 48, ¶ 230; *id.* at 45, ¶¶ 214–15, 217.) "However, that expansion is dependent on whether Russell is able to acquire additional water sources necessary for the facility." (I.O. at 45, ¶ 215.) Dr. Hamilton concluded that the Purefield expansion "would offer additional statewide benefit above and beyond the projections in his pre-filed testimony and expert report." (I.O. at 48, ¶ 230.)

Dr. Hamilton opined that approval of the water transfer "mitigates the risk of economic losses to the Cities from periodic water shortages, providing a direct benefit to water users as well

as indirect and induced benefits to the regional economy through supply chain development and industrial and commercial uses in Kansas which will inure to the benefit of the State." (I.O. at 48, ¶ 231.)

Dr. Hamilton relied on the conclusions of Dr. Anthony Layzell (the Cities' expert paleoclimatologist), and Dr. Jeffrey Basara (the Cities' climate modeling expert) who "addressed the likelihood of future drought periods based on historical records" and using climate models. (I.O. at 46, ¶ 224.) Through those experts, the Cities presented uncontroverted expert testimony that, based on historical climate trends, there is an 80% chance that a decadal drought will occur within a 40-year period. (I.O. at 33, ¶¶ 120–21) and there is a "significantly increasing risk" of multiyear droughts that will affect the Cities' existing sources over the next 25–100 years. (I.O. at 32, ¶ 116). In the likely event of a multidecadal drought, the annual quantity of water available to Hays would reach "an extraordinarily low level of water use that would not suffice to even support basic needs." (Ex. 2823 at Cities 0103530–31.)

Dr. Hamilton also relied on the opinions of Paul McCormick, P.E., who provided expert testimony and opinions relating to the impact that droughts of various durations have on the quantity of water available to the Cities if the water transfer is denied and the Cities are forced to continue relying on their existing water sources. (*See* I.O. beginning at 28, ¶¶ 86–98.) The specific quantities available to the Cities during moderate, exceptional, decadal, and multidecadal droughts are set out in Exhibit 2828, and referenced on page 30, paragraph 97 of the Initial Order. Finally, Dr. Hamilton relied on the cost estimates of Kevin Waddell, P.E., the Cities' expert who testified about the estimated project costs. (I.O. at 49, ¶¶ 235–40.)

Relying on these opinions, Dr. Hamilton was able to calculate the statewide economic impacts of water shortages in the Cities in the event that the water transfer is denied and they are

forced to continue relying on their existing water sources. Based only on the instrumental record, Dr. Hamilton concluded that the average economic detriment in the event the water transfer is denied would be between \$43 million and \$117 million if future climate conditions mirror the climate conditions over roughly the past 100 years. (I.O. at 47, ¶ 226.e–f.) But if the Cities were to suffer a decadal or multidecadal drought, as has been shown to occur in the paleoclimate record (testified by Dr. Layzell), and as predicted by climate modeling (testified by Dr. Basara), the economic detriments are much more significant—as much as \$251 million in economic losses and \$17 million in lost tax revenue, in a single year of a decadal drought. (Ex. 2823 at Cities 0103530.)

Ultimately, the Presiding Officer found that the conclusions of Dr. Hamilton, Mr. Waddell, Mr. McCormick, Dr. Basara, and Dr. Layzell were all reasonable and credible and adopted their opinions as factual in this proceeding. (I.O. at 70, ¶ 20 (Hamilton); *id.* at 67, ¶ 3 (McCormick, Basara, and Layzell); *id.* at 72, ¶ 26 (Waddell).) In so doing, he concluded that the statewide economic impacts of approving the transfer outweigh the economic impacts of denying the transfer. (I.O. at 70, ¶ 23 (summarizing evidence and conclusions relating to economic impacts).) He further concluded that Intervenors "have not credibly established sufficient negative impacts (economic, environmental, or health and welfare) to the state as a whole if the application is approved." (I.O. at 70, ¶ 23.c.) The Presiding Officer's conclusions should be adopted in their entirety.

2. Approval of the transfer will have positive environmental benefits.

As with the economic impacts, the Presiding Officer found that the environmental impacts weigh in favor of approving the Cities' application. As a general matter, approval or denial of the Transfer Application will not have significant statewide environmental impacts. For example, KDHE submitted a comment concluding that it "did not foresee any environmental impacts regardless of whether the water transfer was approved or denied." (I.O. at 59, ¶ 285.f.)

That said, the Cities presented competent evidence that approval of the transfer would yield positive environmental impacts, which the Presiding Officer included in his Findings of Fact, and there are multiple safeguards in place to ensure that no negative environmental impacts will occur. For example, approval of the transfer will result in statewide benefits because it will improve conditions in the Smoky Hill River between Cedar Bluff and the Kanopolis Reservoir in Ellsworth County because the Cities' need to draw water from that source would be reduced. (I.O. at 43, ¶ 201.) And converting the R9 Ranch from irrigated cropland to native grasses will reduce water and wind erosion and provide year-round vegetative ground cover with less water loss and water consumption than tilled cropland. (I.O. at 42–43, ¶ 196.) Moreover, the Cities amended their water monitoring plan to address water quality in accordance with GMD5 regulation K.A.R. 5-25-7. (I.O. at 44, ¶ 205.) The beneficial environmental impacts of approving the transfer are clearly greater than the impacts of denying the transfer. The Presiding Officer concluded: "Intervenors have suggested negative [environmental] impact to the area around the R9 Ranch, but they have failed to establish impacts that would outweigh the benefits to the State as a whole." (I.O. at 70, ¶ 23.c.)

3. Approval of the transfer will have positive public health and welfare benefits.

The public health and welfare benefits also weigh heavily in favor of approving the transfer. The Presiding Officer correctly concluded that "[t]here can be no argument that the need for reliable water sources is not vital to any community." (I.O. at 70, \P 23.a.) He further concluded that "[s]ufficient, substantial, competent, and credible evidence was presented to establish that during an extended drought period, neither Hays nor Russell would be able to meet their current water needs." (I.O. at 71, \P 23.e.)

Given the Cities' current drought-susceptible water sources, the quantity of water available in the event of a multidecadal drought "would not suffice to even support basic needs." (Ex. 2823 at Cities 0103530–31.) The economic impacts *in a single year* in the event of a decadal drought is more than a quarter of a *billion dollars*. (Ex. 2823, at Cities 0103530, Table 5.) And lack of an adequate water supply inhibits the Cities' ability to court new businesses, grow existing businesses, and stunts population growth (I.O. at 26, ¶ 70. *See also id.* at 45, ¶ 213; *id.* at 71, ¶ 23.f).

"Sufficient, substantial, competent and credible evidence was presented to establish that the availability of water sources that were not vulnerable to drought is a benefit for the public health and welfare." (I.O. at 71, ¶ 23.h.) Moreover, the Presiding Officer concluded that: "Intervenors have suggested negative [health and welfare] impact[s] ... but they have failed to establish impacts that would outweigh the benefits to the State as a whole" (I.O. at 70, ¶ 23.c.).

4. Approval of the transfer will have other positive benefits.

Approving the Transfer Application will result in numerous benefits to the State in addition to the economic, environmental, and public health and welfare benefits.

First, it would further the Kansas public policy of encouraging conservation. It is uncontroverted that Hays and Russell are statewide leaders in water conservation; they have, for years, been "looked up to ... as examples for conservation in cities." (Letourneau Test., Tr. Vol. 4 at 888:19–889:2.) Yet Intervenors sought to punish those conservation efforts by requesting that the Presiding Officer cap the quantity of water available based on the Cities' extraordinarily low historical "long-term average" water use in gallons per capita per day ("GPCD"), despite the Kansas statutory requirement that water users be given "[d]ue consideration for past conservation." (K.S.A. 82a-744. *See also*, Letourneau Test., Tr. Vol. 4 at 1050:6–17.) The Presiding Officer correctly rejected Intervenors' highly inequitable proposal, which would have created a perverse

incentive for other water users in the State when considering whether to implement proactive conservation measures.

Second, approval of the Transfer Application will improve the overall health of the local aquifer even though Water PACK and other irrigators within 3 miles of R9 Ranch have continued to increase their diversions. (Ex. 2688 discussed in Section VII.H.) Due to the Cities' phased-in operational plan for using the R9 Water Rights, and the significant reductions in the quantities and rates available to the Cities for municipal use, groundwater levels will actually improve in and around the Ranch after 51 years of municipal pumping. (*See, e.g.*, I.O. at 19, ¶¶ 22–23; *id.* at 69, note 107 ("Effectively, the evidence suggests usage would likely be less initially, and unlikely to immediately begin 51 years of maximum diversion."); Ex. 2827 at Cities 0103727–31 and 0103734–36. *See also id.* at Cities 0103730 (Figure 4-7).)

Third, conversion of the R9 Ranch from tilled cropland to native grasses will result in numerous regional and statewide benefits in addition to the environmental benefits discussed above. For example, it will improve "critical habitat to native grassland birds and other wildlife." (I.O. at 42–43, ¶¶ 194–96.)

D. K.S.A. 82a-1502(c)(4) – Alternative sources of water available to the applicant and present or future users for any beneficial use.

The Cities have searched far and wide for alternative sources of water and the R9 Ranch is the best and only alternative that will provide the Cities with a long-term, sustainable, drought-resistant source of municipal water. (*See, e.g.*, Ex. 1, Appendix B at Cities 0000064–102 ("Summary of efforts to find additional sources of water").) Substantial competent evidence was presented establishing the Cities' efforts, which were not controverted by Intervenors. And, as discussed in Sections VII.A and B, the Cities own the R9 Ranch and are the only present or future users of the water to be transferred.

The Presiding Officer addressed the Cities' efforts to identify and evaluate alternative sources of water to resolve their inadequate water supplies at length. (I.O. at 49, ¶ 241–57, ¶ 282.) The Presiding Officer concluded that "[t]he evidence reflects consideration of many potential options for water for both Hays and Russell." (I.O. at 49, ¶ 241.) The evidence reflects efforts by the Cities to identify alternative water supplies as early as 1969, and extending through 2014, when the R9 Project was initiated, and involved no less than 27 different water-supply alternatives spanning the State from the Ogallala in western Kansas, to the Pikitanoi-Kickapoo option in far northeastern Kansas. (*See* Ex. 1343 at Cities 0171720 (timeline of alternatives explored); *id.* at Cities 0171721 (listing of alternatives explored by date).)

The Initial Order devotes 45 paragraphs, including subparagraphs, to this issue, with citations to numerous exhibits in the record. (I.O. at 49, ¶ 241–57, ¶ 282.) After review of the evidence the Presiding Officer concluded that "the Cities have pursued alternative sources of water and ... that the transfer of water from the R9 Ranch is the best course of action for them to pursue to secure a drought resistant water source." (I.O. at 71, ¶ 24.) The Presiding Officer's conclusion should be adopted in its entirety.

E. K.S.A. 82a-1502(c)(5) — Whether the applicant has taken all appropriate measures to preserve the quality and remediate any contamination of water currently available for use by the applicant.

The evidence shows limited need for the Cities to address water quality and remediate contamination issues over the years; however, to the extent those needs have arisen, the Cities effectively addressed them.

1. The City of Hays has taken all appropriate measures to preserve the quality and remediate any contamination of water currently available for its use.

The primary water contamination issue in Hays involved two wells in Hays' Big Creek wellfield (Well C-20 and C-23), which were contaminated with volatile organic compounds. Hays

began working to address the issue in 1991 by moving points of diversion associated with the water right to avoid the contaminated area and then worked with KDHE to address the issue. The water is now filtered through an "air stripper" to treat it and remove contaminants before using it to supplement current municipal supplies. The Presiding Officer addressed this issue on page 30, ¶ 99 of the Master Order, including record citations. The Presiding Officer correctly found that Hays has taken all appropriate measures to address water quality issues and remediate contamination. (I.O. at 72, ¶ 25.)

2. The City of Russell has taken all appropriate measures to preserve the quality of water currently available for its use.

Russell has not encountered a need to remediate contamination, although Russell's existing water sources are vulnerable to upstream contamination making the water unusable during those events. (I.O. at 31, ¶¶ 103–104.) Russell also addresses water quality in its water softening plant for its Big Creek water and an electrodialysis reversal plant for its Smoky Hill River water. (I.O. at 31, ¶¶ 105, 108.) After reviewing the evidence, the Presiding Officer correctly found that the City has taken all appropriate measures to address water quality issues and remediate contamination. (I.O. at 72, ¶ 25.)

F. K.S.A. 82a1502(c)(6) – The proposed plan of design, construction, and operation of any works or facilities used in conjunction with carrying the water from the point of diversion, which plan shall be in sufficient detail to enable all Parties to understand the impacts of the proposed water transfer.

The Cities presented substantial credible evidence relating to the proposed plan of design, construction, and operation of the water diversion and transportation infrastructure needed for the project. In addition to the expert report and testimony of Kevin Waddell, P.E., relating to the project costs (*See, e.g.*, I.O. at 49, \P 235–37; *id.* at 72, \P 26), the Cities presented the testimony of

Jeff Heidrick, P.E., as well as Exhibits 1766, 1767, and 2686, all of which address this issue in detail.

While the Initial Order does not specifically address Mr. Heidrick's testimony or Exs. 1766, 1767, or 2686 about the plan for design and construction of the infrastructure, Intervenors did not cross-examine Mr. Heidrick (Trans. Vol. 5 at 1095) or introduce evidence critical of the design or construction plans, other than criticizing the cost—which criticisms were rejected by the Presiding Officer. (I.O. at 72, ¶ 26.)

The Initial Order includes numerous findings related to the "operation" of the works or facilities used to divert and transport the water. (*See, e.g.*, I.O. at 17, ¶ 10 and 19–20, ¶¶ 23–24 (54 separate wells will be replaced with 14 municipal wells); id. at 19–20, ¶¶ 21–23 (reduction in quantity (7,625.7 to 4,800 acre-feet per year) and rate of diversion (38,244 to 4,900 gpm) ensures that impairment won't occur); id. at 21, ¶ 33 (the Chief Engineer's impairment finding in the Master Order); id. at 40, ¶ 184 (diversion of 4,800 acre-feet per year for 51 years period would result in a 0.6-foot decline in the saturated thickness of the aquifer on the R9 Ranch); id. at 40, ¶ 179 (discussion of separation distances and well-to-well impairment); id. at 49, ¶¶ 235–38 (Waddell testified about the cost of the infrastructure and that the route had not been selected); id. at 59, ¶ 285 (discussed KDHE's comment, noting that agency "did not foresee any environmental impacts"); id. at 67, ¶ 6 (acknowledging the phased construction project and significant costs relating to the project); id. at 72, ¶ 26 (discussing the work of the Cities' engineering firm, Burns & McDonnell, in estimating the costs and plan for the construction project, and concluding that Waddell's conclusions and methodology are reasonable and credible and adopted as factual).

There is significant evidence relating to the proposed plan of design, construction, and operation that enables all parties to understand the impacts of the proposed water transfer.

G. K.S.A. 82a-1502(b)(2) and K.S.A. 82a-1502(c)(7) — The effectiveness of conservation plans and practices adopted and implemented by the applicant and any other entities to be supplied water by the applicant.

While it is possible that the Cities will supply water to other entities in the future, the Master Order changed the authorized place of use for the R9 Water Rights to the Cities of Hays, Russell, and the Ranch. Supplying water to other entities would require the Chief Engineer to approve changes in the authorized places of use for each of the R9 Water Rights. Those changes, if any, will require those entities to demonstrate need for water and compliance with the other requirements set out in K.S.A. 82a-708b and K.A.R. 5-5-1, et seq.

1. K.S.A. 82a-1502(b)(2)(A) – Both Cities have adopted and implemented conservation plans and practices that are consistent with the Kansas Water Office guidelines.

The Cities presented substantial credible evidence that they have implemented conservation plans consistent with the Kansas Water Office guidelines pursuant to K.S.A. 74-2608, which was not controverted by any party. The Initial Order includes the following Findings and Conclusions establishing that this WTA factor favors approval of the transfer.

- The Cities presented extensive witness testimony detailing their respective conservation efforts and plans, including:
 - Hays City Manager, Toby Dougherty. (I.O. at 29, ¶ 89; id. at 33, ¶¶ 124–26; id. at 34, ¶ 128 and Tr. Vol. 1 at 168:15–169:4; I.O. at 35, ¶ 138; id. at 36, ¶¶ 142–47; id. at 38, ¶ 162.)
 - O Hays Director of Water Resources, Jeff Crispin. (I.O. at 33, ¶ 125; id. at 36, ¶¶ 140–41; id. at 37, ¶ 158; id. at 38, ¶ 163.)
 - O Hays Water Conservation Specialist, Holly Dickman. (I.O. at 36, $\P\P$ 146, 148; *id.* at 37, $\P\P$ 149–56; *id.* at 38, \P 160.)
 - Hays citizen and Executive Director of Grow Hays, Doug Williams. (I.O. at 38, ¶ 161.)
 - o Russell City Manager, Jon Quinday. (I.O. at 35, ¶¶ 133–37; *id.* at 38, ¶¶ 165–68.)
 - o Russell citizen and City Councilperson, Brad Wagner. (I.O. at 34, ¶ 129–32.)
- The Cities have met the effective limits of conservation, noting that "their conservation efforts can only take [the Cities] so far." (I.O. at 71, ¶ 23.e. *See also id.* at 25, ¶ 67.)

- Both Cities' conservation plans are approved by KWO. (I.O. at 57, ¶ 283a; *id.* at 35, ¶ 138. *See also id.* at 36, ¶¶ 140–41 (Hays' plan approved by KWO and consistent with KWO Municipal Water Conservation Plan Guidelines); *id.* at 38, ¶ 165 (Russell's conservation plan approved by KWO).)
- Both Cities are in compliance with their respective conservation programs. (I.O. at 57, ¶ 283a; *id.* at 36, ¶ 142 (Hays); *id.* at 38, ¶ 168 (Russell).)

After reviewing the evidence, the Presiding Officer concluded that:

There is sufficient, substantial, competent, and credible evidence in the record to establish the Cities have adopted and implemented conservation plans and practices which have reduced water consumption. The Intervenors' expert witnesses even noted that water usage in GPCD for residents of Hays and Russell was below regional averages. Comments received from the KWO advised that both Hays and Russel[l] have adopted and implemented conservation plans with KWO pursuant to K.S.A. 74-2608. Further KWO noted Hays has been recognized as a leader in water conservation practices.

(I.O. at 72, \P 27.)

2. K.S.A. 82a-1502(b)(2)(B) — Both Cities have adopted and implemented conservation plans and practices that have been in effect for more than 12 consecutive months immediately prior to the filing of the application.

The Initial Order sets out the following uncontroverted facts and conclusions:

- Hays implemented its conservation plan in 1991. (I.O. at 36, ¶ 140.)
- Russell's conservation plan was approved by KWO in 1997. (I.O. at 38, ¶ 165.)
- The comment submitted by KWO states that the Cities' respective conservation plans are consistent with its guidelines and have been in effect for more than 12 months. (I.O. at 57, ¶ 283a.)
 - 3. K.S.A. 82a-1502(b)(2)(C)—The Presiding Officer found that both Cities have adopted and implemented properly designed rate ordinances that have encouraged and resulted in the wise, efficient, and responsible conservation and management of water.

The Initial Order sets out the following uncontroverted facts and conclusions:

- Both Cities have implemented rate structures with different "tiers" that increase rates substantially during times of drought. (I.O. at 33–34, ¶¶ 125–26 (Hays); *id.* at 35, ¶ 134 (Russell). *See also id.* 33, ¶ 125 (Hays' rate structure is codified into its city code); 38, ¶ 169 (same as to Russell).)
- Both Cities promote water conservation by using rate structures that discourage excessive use of water. (I.O. at 35, ¶ 138.)

Mr. Dougherty testified that there are Hays residents who "pay over \$1,000 a month for their water bill because they choose to put some water down on their lawn in the summertime." (Dougherty Test., Tr. Vol. 1 at 162:1–25.) Doug Williams testified that he paid a \$400 water bill because a tenant who was not paying the water bill failed to pay attention to a leaking toilet and didn't understand how much water can run through a toilet in a month. (Williams Test., Tr. Vol. 2 at 396 and 398–99.)

The Presiding Officer correctly determined that the Cities' rate structures have been properly designed, implemented, and maintained and have resulted in wise use and responsible conservation and management of water.

H. K.S.A. 82a-1502(c)(8) – The conservation plans and practices adopted and implemented by any persons protesting or potentially affected by the proposed transfer, which plans and practices shall be consistent with the guidelines for conservation plans and practices developed and maintained by the Kansas Water Office

The evidence shows that Intervenors wholly failed to establish that they have adopted and implemented conservation plans and practices that are consistent with Kansas Water Office guidelines. *See* Ex. 1268, the "KWO Irrigation Water Conservation Program for the State of Kansas."

The Initial Order does not include specific findings that address conservation plans and practices adopted by persons *protesting* the transfer, i.e., Water PACK and Edwards County, because they failed to present any credible evidence relating to that issue.

At most, there is evidence that Water PACK gives lip service to conservation, but there is no evidence that they actually conserve water or that they have voluntarily reduced water use. In fact, all evidence is to the contrary. The record includes statements that Dick Wenstrom conserved water for many years, but the evidence is contradictory.

- Wenstrom testified that he conserved water over the years but that he withdrew water from the Water Bank and still overpumped in 2022. (Trans. Vol. 8 at 1437–39.)
- He testified about awards he won in 2014 and 2015. (Trans. Vol. 8 at 1280–81.) But he also testified that he quit active farming in 2007, and Intervenors offered no explanation of this facial discrepancy. (Trans. Vol. 8 at 1437.)
- He claimed to have developed an electronic monitoring system but the "project fizzled." (Trans. Vol. 7 at 1283.)
- Wenstrom testified that none of the irrigators in the area have made 29% reductions in the quantity—like the Cities have done by agreeing to the TYRA Limitation— because they can't grow corn without at least 18 inches of irrigation water. (Trans. Vol. 8 at 1418–19; I.O. at 19, ¶ 22.)
- He talked about the need for Water Conservation Areas (Trans. Vol. 8 at 1418), but then conceded that none have been developed because no one has proposed one. (*Id.* at 1427).

In fact, irrigators near the R9 Ranch increased their diversion of water from 1991 to 2017. (Ex. 2688 at Cities 0104219–20 providing exponential, linear, logarithmic, polynomial, power, and moving average trendlines for irrigation water use within three miles of the R9 Ranch excluding the R9 Water Rights.) Exhibit 2688 also shows that diversion for irrigation is inversely proportional to the deviation from normal precipitation. (*Id.* at Cities 0104216.)

The fact that irrigators in the area have failed to conserve is based on their belief that they are entitled to grow corn—year in and year out—rather than crops that require less supplemental water. When asked if he was aware of anyone within 3 miles of the R9 Ranch who has made a voluntary 29 percent reduction in the quantity, Mr. Wenstrom responded:

A: No, I have not and for good reason....

A: Okay. Because an agricultural water right is very different from a municipal water right. An agricultural water right, we have 18 inches that we can pump most of the time. Now, when we go out and buy inputs and plant corn, for example, we don't know if we're going to need 10 inches or 12 inches or 14 or 18 or what we're going to need.

All we know is that we've got corn and we're going to do whatever it takes to get production, but we don't know what the weather's going to do either, so we have to be ready to pump the whole water right if -- if need be, but quite often we don't need to. The average use of -- of all of the water rights in the Rattlesnake Creek basin, for example, is 16 inches.

So that means that over time people haven't used their whole water right, but on an agricultural water right, if somebody says that we're limited to 14, for example, then corn is out, we can't plant corn anymore.

(Trans. Vol. 8 at 1418–19.)

At the end of the day, Intervenors produced no evidence of any conservation plans or practices adopted by any Water PACK member that were consistent with KWO guidelines, which further weighs in favor of granting the Cities' Transfer Application.

I. K.S.A. 82a-1502(c)(9) – Any applicable management program, standards, policies, and rules and regulations of a groundwater management district.

The Cities presented substantial credible evidence that they are in full compliance with GMD5's management program, standards, policies, rules, and regulations, and the Presiding Officer correctly concluded the same. The Initial Order sets out the following facts and conclusions:

- The R9 Ranch is located in GMD5. (I.O. at 17, ¶ 9.)
- GMD5's Revised Management Plan specifically mentions water transfers but does not impose obligations or requirements on transfer applicants. (I.O. at 40, ¶ 178.6)
- The Initial Order addressed the applicable requirements of GMD5, including well placement requirements, which have already been addressed in the Master Order approving the Cities' Change Applications. (I.O. at 39, ¶ 177; *id.* at 44, ¶¶ 202–04.⁷)
- The Initial Order further addressed GMD5 Staff's recommendation in the Change Proceeding to include water quality monitoring requirements, as well as the Cities' subsequent amendment of its monitoring plan to comply with GMD5 Staff's recommendations. (I.O. at 44, ¶¶ 202–205. See Ex. 2637.)

After reviewing the evidence, the Presiding Officer concluded that the proposed water transfer meets all applicable requirements of the GMD5 Management Program. (I.O. at 72, ¶ 28.)

⁶ The Initial Order cites to Exhibit 67b for this proposition; in actuality, it is Exhibit 1-67b.

⁷ The citation in paragraph 202 of the Initial Order to Exhibit 67b should be to Exhibit 1-67b.

The Cities request that the Presiding Officer's findings and conclusions relating to this factor be adopted in full.

VIII. K.S.A. 82a-1502(b)(1) – The proposed water transfer will not impair existing water rights.

Water PACK has failed to provide any evidence that approval of the transfer will impair water reservation rights, vested rights, appropriation rights, or prior applications for permits to appropriate water. Their arguments are based on the false notion that any lowering of the water table in the area around the R9 Ranch would cause impairment. (I.O. at 22, ¶ 42.) The Initial Order sets out the following uncontroverted facts and conclusions:

- The R9 Water Rights are senior to many of the water rights in the area. (I.O. at 19, ¶ 23 (citing Ex. WP WP14895); Ex. 2832 at Cities 0171064; I.O. at 39, ¶¶ 173–74 (citing Ex. 1-5 at Cities 0000442 and Ex. 1-36 at Cities 0002450); *id.* at 68, ¶¶ 10 and 15. *See also* Ex. 2873.)
- The Cities agreed to prohibit locating any new municipal well within one-half mile of any existing irrigation wells outside the boundaries of the R9 Ranch, which is twice as far as DWR's regulatory requirement. (I.O. at 21, ¶ 32 (citing Ex. 251 at 0017036–17038; Ex. 1-2 at 00000145, ¶ 208); *id.* at 44, ¶ 204. *See also* K.A.R. 5-4-4(c)(1)(C).)
- The Presiding Officer noted that DWR approved the Master Order (Cities Ex. 1-2), which reduced the quantity authorized for irrigation based on consumptive use requirements and imposed a further reduction to a rolling average of 4,800 acre-feet per year, the "TYRA Limitation." (I.O. at 19, ¶ 20–23 (Ex. 1-2 at Cities 0000113, ¶ 51; Ex. 1-2 at Cities 0000119–22, ¶¶ 76–91; Ex. 1-2 at Cities 0000165–66).)
- The Master Order reduced the 38,244 gpm rate authorized for irrigation use under the R9 Water Rights to 13,950 gpm, and the Cities plan to operate the 14 municipal wells at 350 gpm for a combined total of 4,900 gpm—an 87% reduction in rate. (I.O. at 19, ¶ 23 (citing Ex. 1-2 at 173, Table 3; Ex. WP14895; Ex. 2832 at Cities 0171064).)
- The KWAA provides that, within the context of change applications, impairment occurs when diversions cause an unreasonable raising or lowering of the static water level that are "beyond a reasonable economic limit." K.S.A. 82a-711(c). (I.O. at 69, ¶ 18. See also I.O. at 64, ¶ 14, quoting K.S.A. 82a-711a.)
- The former Chief Engineer found that changing the points of diversion was reasonable and would not cause impairment of existing water rights. (Ex. 1-2 at 00000146 ¶ 212.) (I.O. at 21, ¶ 33.)

- Mr. Letourneau testified that he is not aware of any evidence of potential impairment that would be caused by the transfer. (Letourneau Test., Tr. Vol. 4 at 847-848.) (I.O., at 41, ¶ 188.)
- Mr. Letourneau testified that even if Intervenors' worst-case scenario was given credence, which was disputed by the Cities, with 140-feet of saturated thickness there would only be a miniscule decline in the water level after 51 years of maximum pumping by the Cities, which DWR says is reasonable. (I.O. at 40–41, ¶ 185.)
- Mr. Letourneau testified that even using Intervenors' "worst case" scenario, approval of the transfer would cause no impact to neighboring wells, (Letourneau Test., Tr. Vol. 4 at 867-868.) (I.O. at 42, ¶ 191.)
- As noted by DWR, "[a]pproval of the transfer application would not reduce the amount of water available in the area surrounding the R9 Ranch." (I.O. at 60, ¶ 288.b.)
- No evidence was presented that approval of the requested water transfer will cause regional impairment of vested or water appropriation rights and Water PACK produced no evidence that any of its members' water rights will be directly impaired by approval of the transfer. (I.O. at 69, ¶ 19.)

Intervenors presented no evidence showing that the transfer will cause the water level to be lowered "at the point of diversion of [any] prior appropriator" or that any existing water right, whether junior or senior to the R9 Water Rights, will not be able to be satisfied. (I.O. at 64, ¶ 14 quoting K.S.A. 82a-711a.) The Presiding Officer concluded that the record is not sufficient to establish that approval of the transfer would cause impairment of vested or water appropriation rights. (I.O. at 70, \P 21; id. at 69, \P 19.)

In addition to the Presiding Officer's Findings of Fact, extensive evidence supports his finding that the proposed transfer will not cause impairment:

- There are 19 water appropriation rights within three miles of the R9 Ranch with priorities junior to most of the R9 Water Rights and 23 more with priorities junior to all of the R9 Water Rights. (Ex. 2873.)
- The R9 Ranch overlies the "Great Bend Prairie aquifer," in contrast to the Ogallala Aquifer farther to the west. (I.O. at 59, ¶ 285b.) The aquifer regularly receives recharge from precipitation. (Dougherty Test., Tr. Vol. 1 at 86:19–87:20. See also generally Ex. 823 at Cities 0022076-92 (the 2021 Great Bend Prairie portion of the Kansas Water Plan.) See also Ex. 2161 at Cities 0077437 (Recharge "varies with time and location, and therefore must carry with it some degree of uncertainty."); id. at Cities 0077435 (The Middle Arkansas River Valley is capable of responding to significant amounts of precipitation, which recharges the aquifer.); Ex. 823 at Cities 0021991 (Precipitation-based aquifer

recharge is highly variable across Kansas and is influenced by a variety of factors including soil types.); Ex. 67 at Cities 0003174 (The GMD5 Management Plan states that "Recharge rates in the District are estimated to be between zero and seven inches, with an overall average of 2½ inches. Recharge is dependent on total annual precipitation, surface soils, depth to water, and characteristics of the strata between the land surface and water table."))

- Intervenors' counsel asked several witnesses about Ex. 1-184, "Groundwater Recharge in the Upper Arkansas River Corridor in Southwest Kansas," which states that in that basin, recharge from precipitation over irrigated land is substantially greater than from precipitation over non-irrigated area. (Tr. Vol. 7 at 1192:16–1193:2, 1030:5–16, and 1269:3–22.) Mr. Barfield testified that the scope of that study was the Upper Ark River corridor which is a different basin that has much different conditions. (Tr. Vol. 7 at 1193:11-13.)
- The GMD5 Model was designed to address the impacts of alternative actions on future hydrologic conditions in GMD5 and to project future conditions in the aquifer. (Ex. 2727 at Cities 0102700 (quoting the "BGW Model Report," located at Ex. 2297 at Cities 0080979.) (I.O. at 40, ¶ 182.)
- Using the GMD5 Model, the Cities' groundwater modeling expert concluded that if the proposed municipal wells on the R9 Ranch pumped an average of 4,800 acre-feet per year for a 51-year period, the result would be 0.6-foot decline in the saturated thickness on the R9 Ranch. (Ex. 2827 at Cities 0103671–0103672.) (I.O. at40, ¶ 184.)
- DWR's groundwater modeler, Dr. Sam Perkins ran the GMD5 and the Burns & McDonnell groundwater models, which confirmed that Mr. McCormick's groundwater modeling was accurate. (Letourneau Test., Tr. Vol. 4 at 856–863; *See also* Ex. 2465 at Cities 0087539–70; Ex. 1-2 at Cities 00000108, ¶ 7; *id.* at Cities 00000117, ¶ 65; *id.* at Cities 00000129, ¶ 33; *id.* at Cities 00000131, ¶¶ 141–42; *id.* at Cities 00000134–35, ¶ 152.; I.O. at 41–42, ¶ 190.)
- Water PACK's groundwater modeling expert's criticism of the GMD5 Model is limited to a single issue: "The BMcD evaluation failed to consider how groundwater recharge on irrigated land would change when the land was no longer irrigated." (Larson Prefiled Test. at 3:71; Larson Direct Test. at 3:75.)
- But when Water PACK's expert was asked specifically about whether the illustrative case in the BGW Model accounted for irrigation enhanced precipitation recharge, he admitted that it did not. (Larson Test., Tr. Vol. 7 at 1247:12–1248:20.)
- Mr. McCormick agreed that recharge from precipitation can be enhanced on irrigated lands in some cases. (McCormick Test., Tr. at 688:2-5.) But it is a site-specific concept that is "one of the hardest concepts to quantify" (*Id.* at 689:3-7.) It must be reviewed and applied correctly. (*Id.* at 688:17-22.)
- Water PACK's expert ran a modified version of the BGW Model using the pre-1970 recharge curve for Recharge Zone 9 from the BGW Model Report instead of the post-1970 curve. (Ex. 2297 at Cities 0081135) (Larson Prefiled Test. at 3:88, 3:99–4:106.)
- Water PACK's expert concluded that the neighboring well closest to the R9 Ranch would have an additional decline of between 2.4 and 2.6 feet in the water level after 51 years of

pumping 4,800 acre-feet per year by the Cities. (Ex. WP-01864 Figure 4.) 8 (I.O. at 40–41, ¶ 185.)

- Water PACK's expert's analysis assumes that recharge from precipitation on the R9 Ranch is the same as recharge in the rest of Recharge Zone 9, which covers most of GMD5. (Ex. 2297 at Cities 0081136.).
- However, the Cities' rangeland scientist expert, Dr. Keith Harmoney, testified that sandy soils have less water-holding capacity allowing more water to pass through than fine-textured soils. (Harmoney Test., Tr. Vol. 5 at 1036:14–17.)
- Dr. Harmoney testified that the native grasses reestablished on the R9 Ranch would utilize less water than agricultural crops because the native grasses have greater water use efficiency to survive hot and dry periods, form leaf tissue for photosynthesis and to produce "sugars to sustain meristem and perennial buds each year based upon precipitation alone." (Ex. 2824 at Cities 0103562.) (I.O. at 43, ¶ 197.)
- Mr. Wenstrom testified that "[O]n the real sandy soils, what we have to do is make light, frequent applications and try to manage the root zones so it's not completely full so we've got a little room for rainfall." (Wenstrom Test., Tr. at 1315:6-10.)
- Mr. Letourneau testified that a 2.8-foot⁹ decline in the water table is not significant in 140 feet of saturated thickness. "It's -- it's not even significant in 45 feet." (Letourneau Test, Tr. Vol. 4, 868:13–15.) A neighboring well owner would not even notice the decline. (Letourneau Test, Tr. Vol. 4, 867:1–23.)
- Even when operating since the mid-1970s as irrigation water rights at a much greater quantity and rate than they will be authorized under the water transfer, irrigation use on the R9 Ranch never caused an impairment complaint. (Letourneau Test., Tr. Vol. 4 at 868:11–12; Exs. 951–980.)

After reviewing all of the evidence, the Presiding Officer concluded that there is no evidence that approval of the water transfer will cause either regional or direct impairment of any vested or water appropriation rights—including those owned by Water PACK's members: "No evidence was presented that approval of the requested water transfer will cause regional impairment of vested or water appropriation rights. Water PACK produced no evidence that any of its members' water rights will be directly impaired by approval of the transfer." (I.O. at 69, ¶ 19.) The Presiding Officer stated, "Regardless of whether the decline was 2.4 feet, 2.6 feet, or 2.8

⁸ The reference is to the irrigation well in the Northeast Quarter of Section 8 T26S-R19W.

⁹ When referring to Mr. Larson's report during his testimony, Mr. Letourneau referred to a 2.8-foot rather than a 2.4-foot decline in the water level. (I.O. at 40, ¶ 185.)

feet, the few inches difference is minimal where the saturated thickness is an average of 100 feet and up to 140 feet." (I.O. at 62, note 77.) Consequently, the Presiding Officer concluded that there is no evidence that approval of the transfer would cause impairment of vested or water appropriation rights. (I.O. at 70, 921.)

The Presiding Officer's conclusion that the water transfer will not cause impairment is supported by extensive evidence in the record. The Panel should approve and adopt it in its entirety.

IX. The Initial Order is accurate and well supported by the record but includes a few minor non-substantive errors.¹⁰

The Initial Order states that the R9 Water Rights authorize a combined diversion of 7,625.7 acre-feet for use for irrigation use. (*See, e.g.,* I.O. at 16–17). In fact, the Cities requested that the quantity authorized for irrigation use be *reduced to* a combined total of 7,625.7 acre-feet for municipal use. (Ex. 3-2 at Cities 0008522.)

The Initial Order states that the area on the west and southwest side of the R9 Ranch has 140 feet of saturated thickness. (I.O. at 40, ¶ 183.) In fact, the saturated thickness varies from 45 feet along the Arkansas River to 140 feet on the eastern portion of the R9 Ranch, with an average saturated thickness of approximately 100 feet. (Ex. 1-3 at Cities 0000355; Ex. 2666.)

Paragraph 29 of the Initial Order at page 72 reads, in part: "Therefore, regardless of whether the transfer is approved or denied, no other beneficial user would be prevented from acquiring an appropriation of the water associated with the R9 Water Rights." Likewise, Paragraph 34 at page 73 reads:

GMD5 is closed to new appropriations of water. Therefore, the R9 Water Rights are not subject to the abandonment provisions of the KWAA.120 The Cities' ownership and use or non-use of the R9 Water Rights *does not prevent* another user from seeking approval to use this allocation of water. Under the current provisions

¹⁰ A few minor errors are set out in footnotes.

of the KWAA and associated regulations, the water associated with the R9 Water Rights can only be utilized by whoever owns the R9 Water Rights.

(Emphasis added.)

These statements are at odds with the other provisions in the Initial Order. (*See, e.g.*, I.O. at 17, ¶ 9; *id.* at 42, ¶ 192; *id.* at 53, ¶ 263.b.; *id.* at 56, ¶ 275; *id.* at 63, ¶ 6; *id.* at 68, ¶ 12; *id.* at 70, ¶ 22.) In Paragraph 29, the Presiding Officer likely meant "no other beneficial user would be permitted to acquire an appropriation of the water associated with the R9 Water Rights." In Paragraph 34, the Presiding Officer likely meant "The Cities' ownership and use or non-use of the R9 Water Rights *does not prevent prevents* another user from seeking approval to use this allocation of water."

Paragraph 175 on page 39 of the Initial Order incorrectly states:

The six most senior appropriation rights of the R9 Water Rights are senior to all other appropriation rights within three miles of the R9 Ranch. Of the 27 most senior appreciation rights within 3 miles of the R9 ranch, 26 of those water rights belong to the Cities as part of the 30 appropriation rights included in the R9 Water Rights. (Ex. 2873.)

Ex. 2873 does not show the water rights within 3 miles of the R9 Ranch that are senior to the R9 Water Rights. It is only intended to show the priority of the R9 Water Rights relative to the junior water rights within 3 miles of the Ranch. The incorrect statement is contradicted in several places:

- "Even though the R9 Water Rights were senior to most of the appropriated rights in the immediate area, the Master Order reduced the combined rate from all the R9 Water Rights." (I.O. at 19, ¶ 23.)
- "The R9 Water Rights are senior to the majority of the water rights in the area immediately surrounding the R9 Ranch." (I.O. at 68, ¶ 10.); "It is also noted that the R9 Water Rights are existing water rights, which are senior to many of the water rights in the area." (I.O. at 68, ¶ 15.)

These inaccuracies have no impact on the overwhelming evidentiary support in favor of the Transfer Application or the Presiding Officer's overall findings of fact and conclusions of law. But the Cities wanted to point them out to the Panel to clarify the record and to avoid future confusion.

X. Conclusion.

Both Hays and Russell must have a new, drought-resistant source of additional water for municipal use. Both Cities have been excellent stewards of their available supplies. They employ conservation measures that most Kansans would consider draconian. Despite these efforts, current sources are inadequate, especially during droughts.

The R9 Ranch is the only alternative source of water available to the Cities. It was purchased on the open market from willing sellers. Because they own the Ranch, the Cities are the only reasonably foreseeable current and future users of the water.

Approval of the transfer will result in substantial economic and public health and welfare benefits to Hays, Russell, the region, and the State of Kansas. Returning the Ranch to native grass is already yielding substantial environmental benefits.

Largely because of opposition to the transfer, the Cities spent nearly two decades searching for an alternative source, without success. But no good deed goes unpunished. Opposition to the transfer is based on fallacious contentions about Kansas water law driven, at its core, by a rapacious desire to hoard water that belongs to the State and allocated to the Cities. But the opposition is utterly without merit. Water PACK and Edwards County have not, and cannot, produce evidence that the transfer will impair existing water rights—because it will not.

The benefits to the State for approving the transfer are substantial; the Intervenors did not and could not produce evidence of any benefits to the State for denying the transfer.

The Cities of Hays and Russell respectfully request that the panel issue a Final Order adopting the findings and conclusions set out in ALJ Spurgin's Initial Order approving the Cities' First Amended Water Transfer Application.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing was served this 8th day of March 2023, by electronic mail to the following:

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		Original Chan	ge Applications	Amended Change	Applications	Applications		
File No.	Circle Nos.	Date	Citation	Date Citation		Date	Citation	
21,729	Circles 7, 8, 9, & 10	June 26, 2015	Ex. 1-5, Cities 0000432-510	November 28, 2016	Ex. 1-5, Cities 0000422-430	March 25, 2019	Ex. 1-5, Cities 0000404-421	
21729-D2		June 26, 2015	Ex. 1-6, Cities 0000523-532	No Amended C	hange App	March 25, 2019	Ex. 1-6, Cities 0000511-522	
21,730	Circle 1	June 28, 2015	Ex. 1-7, Cities 0000619-656	November 28, 2016	Ex. 1-7, Cities 0000611-617	March 25, 2019	Ex. 1-7, Cities 0000602-610	
21,731	Circles 2, 3, 4, & 5	June 26, 2015	Ex. 1-8, Cities 0000687-782	November 28, 2016	Ex. 1-8, Cities 0000674-685	March 26, 2019	Ex. 1-8, Cities 0000657-673	
21,732	Circles 6, 11, & 12	June 26, 2015	Ex. 1-9, Cities 0000805-861	November 28, 2016	Ex. 1-9, Cities 0000797-803	March 25, 2019	Ex. 1-9, Cities 0000783-796	
21,732-D2		April 27, 2018	Ex. 1-10, Cities 0000878-927	No Amended C	hange App	March 25, 2019	Ex., 1-10, Cities 0000862-877	
21,733	Circle 13	June 26, 2015	Ex. 1-11, Cities 0000944-986	November 28, 2016	Ex. 1-11, Cities 0000936-942	NO DATE	Ex. 1-11, Cities 0000928-935	
21,734	Circles 14, 15, 16, 17, & 18	June 26, 2015	Ex. 1-12, Cities 0001015-1085	November 28, 2016	Ex. 1-12, Cities 0000999- 0001011	March 25, 2019	Ex. 1-12, Cities 0000987-0000998	
21,841	Circle 8A	June 26, 2015	Ex. 1-13, Cities 0001102-1135	November 28, 2016	Ex. 1-13, Cities 0001094-1100	March 25, 2019	Ex. 1-13, Cities 0001086-1093	
21,842	Circle 11A	June 26, 2015	Ex. 1-14, Cities 0001151-1187	November 28, 2016	Ex. 1-14, Cities 0001143-1149	March 25, 2019	Ex. 1-14, Cities 0001136-1142	
22,325	Circle 19	June 26, 2015	Ex. 1-15, Cities 0001205-1258	November 28, 2016	Ex. 1-15, Cities 0001197-1203	March 25, 2019	Ex. 1-15, Cities 0001188-1196	
22,326	Circle 20	June 26, 2015	Ex. 1-16, Cities 0001276-1337	November 28, 2016	Ex. 1-16, Cities 0001268-1274	March 25, 2019	Ex. 1-16, Cities 0001259-1267	
22,327	Circle 21	June 26, 2015	Ex. 1-17, Cities 0001355-1398	November 28, 2016	Ex. 1-17, Cities 0001347-1353	March 25, 2019	Ex. 1-17, Cities 0001338-1346	
22,329	Circle 24	June 29, 2015	Ex. 1-18, Cities 0001415-1453	November 28, 2016	Ex. 1-18, Cities 0001407-1413	March 26, 2019	Ex. 1-18, Cities 0001399-1406	
22,330	Circle 25	June 26, 2015	Ex. 1-19, Cities 0001471-1509	November 28, 2016	Ex. 1-19, Cities 0001461-1467	March 26, 2019	Ex. 1-19, Cities 0001454-1460	
22,331	Circle 22	June 26, 2015	Ex. 1-20, Cities 0001528-1575	November 28, 2016	Ex. 1-20, Cities 0001520-1526	March 26, 2019	Ex. 1-20, Cities 0001510-1519	
22,332	Circle 23	June 26, 2015	Ex. 1-21, Cities 0001592-1634	November 28, 2016	Ex. 1-21, Cities 0001584-1590	March 25, 2019	Ex. 1-21, Cities 0001576-1583	
22,333	Circle 39	June 26, 2015	Ex. 1-22, Cities 0001651-1702	November 28, 2016	Ex.1-22, Cities 0001643-1649	March 25, 2019	Ex. 1-22, Cities 0001635-1642	
22,334	Circle 27	June 26, 2015	Ex. 1-23, Cities 0001720-1763	November 28, 2016	Ex. 1-23, Cities 0001712-1718	March 25, 2019	Ex. 1-23, Cities 0001703-1711	
22,335	Circle 26	June 26, 2015	Ex. 1-24, Cities 0001782-1824	November 28, 2016	Ex. 1-24, Cities 0001774-1870	March 26, 2019	Ex. 1-24, Cities 0001764-1773	



	Quantity and Rate Converted To Municipal Use				Proposed Municipal Well (Change Approval)					Change Application)		
File No.	Well Site	Acre-Feet	Maximum GPM	Citation	Quarter Calls	S-T-R	Feet North	Feet West	Citation	Well Site	Citation	
21,729	A	376	945	Ex. 1, Cities 0000007-10	NE/4, NE/4, SW/4	29-T25S-R19W	2,259	2,705	Ex. 1-2, Cities 0000185	A	Ex. 1-5, Cities 0000429-30	
21729-D2	A	376	945	Ex. 1, Cities 0000007-10	NE/4, NE/4, SW/4	29-T25S-R19W	2,259	2,705	Ex. 1-2, Cities 0000190	No Ameno	led Change App	
21,730	G	176	1,040	Ex. 1, Cities 0000007-10	NW/4, NE/4, SW/4	30-T25S-R19W	2,282	3,870	Ex. 1-2, Cities 0000195	G	Ex. 1-7, Cities 0000616-617	
21,731	G&H	800	1,040/765	Ex. 1, Cities 0000007-10	NW/4, NE/4, SW/4 & SW/4, SW/4, NE/4	30-T25S-R19W	2282 & 3142	3870 & 2099	Ex. 1-2, Cities 0000200	G&H	Ex. 1-8, Cities 0000682-685	
21,732	В	353	885	Ex. 1, Cities 0000007-10	SE/4, SW/4, NE/4	32-T25S-R19W	2,724	1,916	Ex. 1-2, Cities 0000205	В	Ex. 1-9, Cities 0000802-803	
21,732-D2	В	240	885	Ex. 1, Cities 0000007-10	SE/4, SW/4, NE/4	32-T25S-R19W	2,724	1,916	Ex. 1-2, Cities 0000209	No Ameno	led Change App	
21,733	С	189	1,360	Ex. 1, Cities 0000007-10	NE/4, SE/4, SW/4	33-T25S-R19W	824	3,036	Ex. 1-2, Cities 0000214	С	Ex. 1-11, Cities 0000941-942	
21,734	C, D, E	889.1	1,360/1,500/1,2 70	Ex. 1, Cities 0000007-10	NE/4, SE/4, SW/4	33-T25S-R19W	824	3,036	Ex. 1-2, Cities 0000219	C, D, E	Ex. 1-12, Cities 0001006-1011	
21,841	F	195	1,040	Ex. 1, Cities 0000007-10	NW/4, SE/4, NE/4	4-T26S-R19W	4,545	1,311	Ex. 1-2, Cities 0000224	F	Ex. 1-13, Cities 0001099-1100	
21,842	Е	195	1,270	Ex. 1, Cities 0000007-10	NW/4, SE/4, SE/4	5-T26S-R19W	1,577	901	Ex. 1-2, Cities 000229	Е	Ex. 1-14, Cities 0001148-1149	
22,325	I	186	805	Ex. 1, Cities 0000007-10	SE/4, NE/4, NW/4	1-T26S-R20W	5,034	2,790	Ex. 1-2, Cities 0000234	I	Ex. 1-15, Cities 0001202-1203	
22,326	I	188	805	Ex. 1, Cities 0000007-10	SE/4, NE/4, NW/4	1-T26S-R20W	5,034	2,790	Ex. 1-2, Cities 0000239	I	Ex. 1-16, Cities 0001273-1274	
22,327	I	145.8	805	Ex. 1, Cities 0000007-10	SE/4, NE/4, NW/4	1-T26S-R20W	5,034	2,790	Ex. 1-2, Cities 0000244	I	Ex. 1-17, Cities 0001352-1353	
22,329	J	75	700	Ex. 1, Cities 0000007-10	NE/4, SW/4, SW/4	1-T26S-R20W	1,634	4,078	Ex. 1-2, Cities 0000249	J	Ex. 1-18, Cities 0001412-1413	
22,330	J	75	700	Ex. 1, Cities 0000007-10	NE/4, SW/4, SW/4	1-T26S-R20W	1,634	4,078	Ex. 1-2, Cities 0000254	J	Ex. 1-19, Cities 0001466-1467	
22,331	J	180	700	Ex. 1, Cities 0000007-10	NE/4, SW/4, SW/4	1-T26S-R20W	1,634	4,078	Ex. 1-2, Cities 0000259	J	Ex. 1-20, Cities 0001525-1526	
22,332	J	135	700	Ex. 1, Cities 0000007-10	NE/4, SW/4, SW/4	1-T26S-R20W	1,634	4,078	Ex. 1-2, Cities 0000264	J	Ex. 1-21, Cities 0001589-1590	
22,333	K	50	700	Ex. 1, Cities 0000007-10	NW/4, SW/4, NE/4	11-T26S-R20W	3,646	2,143	Ex. 1-2, Cities 0000269	K	Ex. 1-22, Cities 0001648-1649	
22,334	K	136.1	700	Ex. 1, Cities 0000007-10	NW/4, SW/4, NE/4	11-T26S-R20W	3,646	2,143	Ex. 1-2, Cities 0000274	K	Ex. 1-23, Cities 0001717-1718	
22,335	K	142.6	700	Ex. 1, Cities 0000007-10	NW/4, SW/4, NE/4	11-T26S-R20W	3,646	2,143	Ex. 1-2, Cities 0000279	K	Ex. 1-24, Cities 0001779-1780	

		Original Chan	ge Applications	Amended Change	Applications	Applications		
File No.	Circle Nos.	Date	Citation	Date	Citation	Date	Citation	
22,338	Circle 28	June 26, 2015	Ex. 1-25, Cities 0001843-1880	November 28, 2016	Ex. 1-25, Cities 0001835-1841	March 26, 2019	Ex. 1-25, Cities 0001825-1834	
22,339	Circle 29	June 26, 2015	Ex. 1-26, Cities 0001897-1929	November 28, 2016	Ex. 1-26, Cities 0001889-1895	March 26, 2019	Ex. 1-26, Cities 0001881-1888	
22,340	Circle 31	June 26, 2015	Ex. 1-27, Cities 0001945-1980	November 28, 2016	Ex. 1-27, Cities 0001937-1943	March 25, 2019	Ex. 1-27, Cities 0001930-1936	
22,341	Circle 30	June 26, 2015	Ex. 1-28, Cities 0001997-2046	November 28, 2016	Ex. 1-28, Cities 0001989-1995	March 25, 2019	Ex. 1-28, Cities 0001981-1988	
22,342	Circle 36	June 26, 2015	Ex. 1-29, Cities 0002062-2095	November 28, 2016	Ex. 1-29, Cities 0002054-2060	March 25, 2019	Ex. 1-29, Cities 0002047-2053	
22,343	Circle 35	June 26, 2015	Ex. 1-30, Cities 0002111-2146	November 28, 2016	Ex. 1-30, Cities 0002103-2109	March 25, 2019	Ex. 1-30, Cities 0002096-2102	
22,345	Circle 38	June 26, 2015	Ex. 1-31, Cities 0002163-2197	November 28, 2016	Ex. 1-31, Cities 0002155-2161	March 25, 2019	Ex. 1-31, Cities 0002147-2154	
22,346	Circle 37	June 26, 2015	Ex. 1-32, Cities 0002214-2245	November 28, 2016	Ex. 1-32, Cities 0002206-2212	March 25, 2019	Ex. 1-32, Cities 0002198-2205	
27,760	Circles 32 & 33	June 26, 2015	Ex. 1-33, Cities 0002265-2326	November 28, 2016	Ex. 1-33, Cities 0002255-2263	March 25, 2019	Ex. 1-33, Cities 0002246-2254	
29,816	Circles 9A & 10A	June 26, 2015	Ex. 1-34, Cities 0002346-2382	November 28, 2016	Ex. 1-34, Cities 0002336-2344	March 25, 2019	Ex. 1-34, Cities 0002327-2335	
30,083	Circle 36	June 26, 2015	Ex. 1-35, Cities 0002398-2425	November 28, 2016	Ex. 1-35, Cities 0002390-2396	March 25, 2019	Ex. 1-35, Cities 0002383-2389	
30,084	Circle 24	June 26, 2015	Ex. 1-36, Cities 0002442-2459	November 28, 2016	Ex. 1-36, Cities 0002433-2438	March 26, 2019	Ex. 1-36, Cities 0002426-2432	

	Quantity	and Rate Co	onverted To M	unicipal Use	Proposed Municipal Well (Change Approval)					Change Application)		
File No.	Well Site	Acre-Feet	Maximum GPM	Citation	Quarter Calls	S-T-R	Feet North	Feet West	Citation	Well Site	Citation	
22,338	L	116.6	950	Ex. 1, Cities 0000007-10	SW/4, NE/4, SE/4	10-T26S-R20W	1,863	883	Ex. 1-2, Cities 0000284	L	Ex. 1-25, Cities 0001840-1841	
22,339	L	118.8	950	Ex. 1, Cities 0000007-10	SW/4, NE/4, SE/4	10-T26S-R20W	1,863	883	Ex. 1-2, Cities 0000289	L	Ex. 1-26, Cities 0001894-1895	
22,340	M	116.6	950	Ex. 1, Cities 0000007-10	SW/4, NE/4, NE/4	15-T26S-R20W	4,367	1,228	Ex. 1-2, Cities 0000294	М	Ex. 1-27, Cities 0001942-1943	
22,341	M	188	950	Ex. 1, Cities 0000007-10	SW/4, NE/4, NE/4	15-T26S-R20W	4,367	1,228	Ex. 1-2, Cities 0000299	M	Ex. 1-28, Cities 0001994-1995	
22,342	M	75	950	Ex. 1, Cities 0000007-10	SW/4, NE/4, NE/4	15-T26S-R20W	4,367	1,228	Ex. 1-2, Cities 0000304	М	Ex. 1-29, Cities 0002059-2060	
22,343	N	122	1,040	Ex. 1, Cities 0000007-10	SW/4, NW/4, SE/4	15-T26S-R20W	1,714	2,450	Ex. 1-2, Cities 0000309	N	Ex. 1-30, Cities 0002108-2109	
22,345	N	159	1,040	Ex. 1, Cities 0000007-10	SW/4, NW/4, SE/4	15-T26S-R20W	1,714	2,450	Ex. 1-2, Cities 0000314	N	Ex. 1-31, Cities 0002160-2161	
22,346	N	140.4	1,040	Ex. 1, Cities 0000007-10	SW/4, NW/4, SE/4	15-T26S-R20W	1,714	2,450	Ex. 1-2, Cities 0000319	N	Ex. 1-32, Cities 0002211-2212	
27,760	K & L	285.1	1	Ex. 1, Cities 0000007-10	NW/4, SW/4, NE/4 & SW/4, NE/4, SE/4	11-T26S-R20W & 10-T26S-R20W	3,646 / 1,863	2,143/883	Ex. 1-2, Cities 0000324-325	K&L	Ex. 1-33, Cities 0002260-2263	
29,816	E & F	188	1,270/1,040	Ex. 1, Cities 0000007-10	NW/4, SE/4, SE/4 & NW/4, SE/4, NE/4	5-T26S-R19W & 4- T26S-R19W	1,577 / 4,545	901/1,311	Ex. 1-2, Cities 0000329-330	E & F	Ex. 1-34, Cities 0002341-2344	
30,083	М	69.7	950	Ex. 1, Cities 0000007-10	SW/4, NE/4, NE/4	15-T26S-R20W	4,367	1,228	Ex. 1-2, Cities 0000334	М	Ex. 1-35, Cities 0002395-2396	
30,084	J	75	700	Ex. 1, Cities 0000007-10	NE/4, SW/4, SW/4	1-T26S-R20W	1,634	4,078	Ex. 1-2, Cities 0000339	J	Ex. 1-36, Cities 0002437-2438	