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July 14, 2023

Via OAH E-Filing System

Hon. Matthew A. Spurgin
Administrative Law Judge
Office of Administrative Hearings
1020 S. Kansas Ave.
Topeka, KS 66612

Re: Application of the Cities of Hays, Kansas and Russell, Kansas for Approval to Transfer Water from Edwards County, Kansas Pursuant to the Kansas Water Transfer Act - OAH Case No. 23AG0003 AG

Dear Judge Spurgin:

Attached is a bench copy of the trial brief we filed today with OAH.

Thank you.

Sincerely,

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Enclosure

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**BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF KANSAS**

IN THE MATTER OF THE APPLICATION OF
THE CITIES OF HAYS, KANSAS
AND RUSSELL, KANSAS FOR APPROVAL TO
TRANSFER WATER FROM EDWARDS
COUNTY PURSUANT TO THE KANSAS
WATER TRANSFER ACT

OAH Case No. 23AG0003 AG
Hon. Matthew A. Spurgin

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CONTROLLING OR MOST APPROPRIATE AUTHORITY

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I. INTRODUCTION

The cities of Hays and Russell, Kansas (the “Cities”) invoke the Kansas Water Transfer Act, K.S.A. 82a-1501 et.seq. (the “Act”), in seeking to obtain approval to transfer water via a pipeline from a location in Edwards County, Kansas to the respective cities. The source property located in Edwards County is jointly owned by the Cities and is known colloquially as the R9 ranch. The proposed transfer is characterized as an interbasin transfer. Interbasin water transfers convey water from one river basin to another using non-natural means, such as pipelines, aqueducts, or canals. Interbasin transfers can significantly affect water supplies, hydrology, and the environment in both donor and receiving basins.

The Cities’ efforts to obtain the right to transfer water from the R9 Ranch, formerly known as the Circle K Ranch, have proceeded on two tracks. The Cities earlier filed and prosecuted a case before the Chief Engineer for the Division of Water Resources¹ to change the use of the water rights appurtenant to the R9 ranch from irrigation to municipal. The former Chief Engineer approved the change. That decision was appealed to the Edwards County District Court where the Chief Engineer’s master order was largely affirmed. Water PACK then sought appellate review. Water PACK’s appeal of the district court order is presently pending before the Kansas Supreme Court where the present Chief Engineer is a party. His vigorous advocacy in favor of affirmance of the district court

¹ David Barfield was the presiding Chief Engineer. He has now been retained by the Cities as an expert witness. Mr. Barfield solicited the engagement. See attached Exhibit 1.

order raises questions regarding his ability to remain impartial in his ultimate role in this proceeding.² The Supreme Court recently remanded the case to the district court for additional fact finding.

The Kansas Water Transfer Act, K.S.A. 82a-1501 et.seq. (the “Act”), was initially adopted in 1983 and then amended in 1993. The Act defines a “water transfer” to mean “the diversion and transportation of water in a quantity of 2,000 acre feet or more per year for beneficial use at a point of use outside a 35-mile radius from the point of diversion of such water.” Proposed transfers may not be approved absent compliance with a panoply of enumerated requirements. Most broadly it must be determined that approval of the transfer will provide a net benefit to the State.

Specifically, K.S.A 82a-1502 provides that no transfer may be approved unless the transfer applicant has adopted and implemented (for at least 12 months) conservation measures consistent with the guidelines established by the Kansas Water Office. Applicants providing a public water supply must also have implemented a rate structure determined to be effective in encouraging the efficient use of water.

While the conservation requirements are an important tool for encouraging the efficient use of water, the “benefits to the state” analysis, as mandated by the statute,

² See, e.g., *Davenport Pastures, LP v. Morris Cnty. Bd. of Cnty. Comm'rs*, 291 Kan. 132, 143, 238 P.3d 731, 738 (2010) (attorney's dual roles “highly improper” and his role as advocate was “clearly in conflict” with his former quasi-judicial position); *Marshall v. Jerrico, Inc.*, 446 U.S. 238, 242 (1980) (due process requirements entitle a person to an impartial and disinterested tribunal); *Belsinger v. District of Columbia*, 295 F. Supp. 159, 162 (D. D.C. 1969)(if a hearing officer's words or actions create a likelihood, or the appearance of a likelihood, that his or her mind is effectively closed to reason or persuasion from one side, disqualification may be appropriate), *rev'd on other grounds*, 436 F. 2d 214 (D.C. Cir. 1970).

requires a comprehensive review that includes, but is not limited to, the effectiveness of the conservation measures.

In weighing the benefits to the State, the decision-maker must consider all relevant matters, including:

- (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.

Id.

More specific still are the implementing regulations which require, in pertinent part, that the transfer application show the following:

- (e) the proposed use made of the water;

(f) any economically and technologically feasible alternative source or sources of supply available to the applicant and to any other present or future users of the water proposed to be transferred. The water transfer application shall specify why this source of supply was selected over the alternative sources available;

[...]

(m) the economic, environmental, public health and welfare, and other impacts of approving or denying the transfer of water;

[...]

(r) if applicable, population projections for any public water supply system that will be supplied by the water transfer, and the basis for those projections;

(s) the projected water needs of the applicant and of any other entities to be supplied water by the applicant, and the basis for those projections;

[...]

(w) the projected per capita per day usage of any public water supply user to be supplied water by the applicant;

K.A.R. 5-50-2.

As discussed in detail below, the Cities' water transfer application is deficient in respect to each of these enumerated requirements. Based by analogy upon K.A.R. 5-42-1, this tribunal would arguably be justified in denying the application as incomplete without conducting further proceedings. *Cf.*, *Bushno v. Kansas Dep't of Agric.*, 238 P.3d 331 (Kan. App. 2010) ("First, the chief engineer ruled the application submitted by the Bushnos could not be approved because it lacked sufficient information requested by the KDA.").

As is apparent from the fact that it is distinct from the process to obtain a change of water use, the impetus for the Act and the *raison d'être* for its existence is plainly to prevent impairment and ensure that large-scale transfers of water are limited to amounts consistent with the present and projected needs of the applicant. The evidence to be

presented will show that (i) approval of the present iteration of the Cities’ application is precluded by application of the anti-speculation doctrine;³ (ii) the Cities seek authority to transfer a quantity of water far in excess of their present or reasonably expected needs; (iii) the planned transfer volume will materially lower the regional water table and impair surrounding appropriators; (iv) the Cities’ population growth projections are beyond suspect and without cogent support; (v) the Cities have failed and refused to undertake the requisite water needs analysis; and (vi) the current transfer application represents what in many critical respects is a perfunctory *pro forma* approach to an exceedingly complex undertaking that is largely reliant upon analytical support from a contractor that stands to realize millions of dollars in fees if the project is greenlit and the former Chief Engineer who was the decision-maker in relation to the earlier related change of use proceeding. *Cf.*, K.S.A. 77-514 (“Except as otherwise provided by law, in any proceeding under this act, a person shall not be eligible to act as presiding officer, and shall not

³ The present version of the Water Transfer Act is a pristine landscape in terms of judicial analysis, but as discussed in more detail hereinafter it borrows and largely embraces western states’ water law precepts, including preeminently the anti-speculation doctrine. The doctrine has been codified in Kansas, Burke Griggs, *Legal Aspects of Large-Scale Water Transfers* (December 1, 2020), and is summarized in the seminal *Pagosa I* decision by the Colorado Supreme Court.

“We hold that a governmental water supply agency has the burden of demonstrating three elements in regard to its intent to make a non-speculative conditional appropriation of unappropriated water: (1) what is a reasonable water supply planning period; (2) what are the substantiated population projections based on a normal rate of growth for that period; and (3) what amount of available unappropriated water is reasonably necessary to serve the reasonably anticipated needs of the governmental agency for the planning period, above its current water supply. In addition, it must show under the “can and will” test that it can and will put the conditionally appropriated water to beneficial use within a reasonable period of time. *Pagosa Area Water & Sanitation Dist. v. Trout Unlimited*, 170 P.3d 307, 313 (Colo. 2007), as modified (Nov. 13, 2007).

provide confidential legal or technical advice to a presiding officer in the proceeding, if that person: (1) Has served in an investigatory or prosecutorial capacity in the proceeding or a proceeding arising out of the same event or transaction.”); *see also, Pork Motel, Corp. v. Kansas Dep't of Health & Env't*, 234 Kan. 374, 383, 673 P.2d 1126, 1135 (1983) (“The APA says specifically: ‘An employee or agent engaged in the performance of investigative or prosecuting functions for an agency in a case may not, *in that or a factually related case*, participate or advise in the decision.’”).

II. FACTUAL BACKGROUND

In their “First Amended Application to Transfer Water from Edwards County Kansas to the Cities of Hays and Russell Kansas” (the “Application”), the Cities request authorization to transfer 7,625.5 acre-feet annually from the R9 ranch for municipal use.⁴ An acre-foot of water equals 325,872.36 U.S. gallons. *New Mexico v. Gen. Elec. Co.*, 335 F. Supp. 2d 1185, 1196 (D.N.M. 2004). The request equates to 2,484,939,681.18 gallons of water per year. By way of comparison, Hays used 1,792 acre-feet of water in 2020 and Russell used 974 acre-feet.⁵ The Cities are thus seeking authorization to transfer vastly more water from the R9 Ranch than they cumulatively consumed as recently as 2020. Moreover, it appears the City of Russell has an alternative source of additional water.⁶

⁴ Application at 5.

⁵ Direct Testimony of Stephen F. Hamilton on behalf of Cities at 11.

⁶ “A recent Bartlett & West, Inc. report recommended further study of this source as an alternative for Russell. The report indicates that Russell could obtain an additional 1,075 acre-feet of water from new water rights in the Saline River alluvium and the Salt Creek alluvium at a projected cost of \$7.6 million, or just

A. THE CITIES’ POPULATION GROWTH PROJECTION IN THE APPLICATION IS MATERIALLY AND DEMONSTRABLY ERRONEOUS

The Cities recognize and concede that approval of a water transfer is limited to amounts corresponding to their “reasonable needs.” *Application at 44*; K.S.A. 82a-707(e) (“Appropriation rights in excess of the reasonable needs of the appropriators shall not be allowed.”). In attempting to rationalize their transfer request the Cities rely upon a population growth projection that even their own expert debunks. “The 2010 population and the 2017 population estimates are from the U.S. Census. Population projections for 2026 and 2036 are based on 2% annual population growth as approved by the Chief Engineer.”

- (r) **If applicable, population projections for any public water supply system that will be supplied by the water transfer, and the basis for those projections:**

Table 6				
	2010 Population ¹⁵⁷	July 1, 2017 Estimated Population ¹⁵⁸	2026 Projected Population ¹⁵⁹	2036 Projected Population ¹⁶⁰
City of Hays	20,510	20,845	25,410	30,975
City of Russell	4,506	4,463	5,440	6,632

The 2010 population and the 2017 population estimates are from the U.S. Census. Population projections for 2026 and 2036 are based on 2% annual population growth as approved by the Chief Engineer.¹⁶¹

Application at 44.

over \$7,000 per acre-foot. The report states that ‘water quality shouldn’t be a significant issue for the City of Russell because the newly constructed EDR WTP has the technology to treat the water from this aquifer.’ “This source may provide Russell with an alternative. . . .” *Application at 84-85.*

The following more recent and much smaller growth projection is from the Cities' retained population growth expert, Amy A. Haase.

Figure 5: Population Projection

Projected Permanent Population	2020	2025	2030	2035
0.4% Annual Growth Rate	17,889	18,250	18,618	18,993
1.0% Annual Growth Rate	17,889	18,802	19,761	20,769

Whether one accepts Haase's one percent projected growth estimate or her estimate of 0.4% based upon historical data,⁷ either is markedly different than the 2% growth rate that serves as the premise for the Cities' application.

Intervenors retained Harvey Economics to analyze and report upon the reasonably expected population growth for the Cities. The distinguished curricula vitae of the principal researchers, Mr. Harvey and Ms. Walker, are attached as Exhibit 2. They addressed the question of projected population growth in their direct testimony.

Q Is the Cities' growth assumption appropriate?

A The assumption of two percent annual population growth appears to be based on outdated information - historical growth from as far back as 1950. Recent trends indicate much lower growth rates for Hays and population decline for Russell. The Cities have not provided sufficient support to substantiate a two percent annual growth rate over the next 20 years.

⁷ "If it is assumed that 85% of the students are not included in the city's permanent population then the city grew by approximately 0.4% annually during the 2010s." *Haase Expert Report*.

Q What are the actual growth rates for the Cities of Hays and Russell?

A Over the last four decades, growth for Hays has averaged about 0.65 percent per year, with slower growth (0.29 percent per year) between 2010 and 2020. Russell has experienced a continuously declining population since 1980. The slow or declining growth is unlikely attributed to water availability solely, but most likely influenced by various factors.

Population projections developed by the University of Kansas suggest a 0.34 percent annual growth rate for Hays and a 0.06 percent annual growth rate for Russell through 2045, based on the future outlook for Ellis and Russell counties. Those projections, based on current data and information, differ significantly from the Cities' growth assumption.

In terms of future water needs, expected population growth is of course a critical component of the analysis. The question is made part of the regulations. “if applicable, population projections for any public water supply system that will be supplied by the water transfer, and the basis for those projections.” K.A.R. 5-50-2(r). Because the population growth estimate incorporated in the water transfer application is clearly wrong, the application is necessarily incomplete and defective.

B. THE CITIES UNDERSTAND AND CONCEDE THEY DO NOT NEED THE VOLUME OF WATER THEY SEEK IN THE APPLICATION

The Cities concede they do not need the volume of water they are seeking approval to transfer. This colloquy is from the City Manager’s deposition. “Q The -- on the second

page at the top of that, there is in boldface response, and it says denied, and then below that is what purports to be a corrected quote from Mayor Schwaller, which I'm quoting from that, "if I may elaborate on Commissioner Roth's question, we certainly don't need the entire water right now that we can take from the ranch." Do you agree with that statement? **A I do.**" *Dougherty, Toby* (Page 154:1 to 154:11) (emphasis added).

But largely dispositive of their request for approval of the water transfer is the Cities' remarkable admission that they have never obtained a future water needs analysis. The Hays City Manager was deposed and admitted that Hays did not seek and does not have a future water needs analysis. "Q Yes, well, tell me about the specific reports that addressed the need, the future water needs of the City of Hays. **A Off the top of my head, I can't tell you specific reports that have addressed water needs.**" *Dougherty, Toby* (Page 92:7 to 92:14) (emphasis added).

The Water Transfer Act is intended to serve as a check to ensure that water transfers do not exceed the reasonable future needs of the applicant. The reasonable needs limitation is endemic to Kansas water law. *E.g., Shipe v. Pub. Wholesale Water Supply Dist. No. 25*, 289 Kan. 160, 167, 210 P.3d 105, 110 (2009) ("In addition, the KWAA dedicates water resources to the use of the public, prohibits water rights in excess of the reasonable needs of the appropriators, and subjects water rights to the principle of beneficial use."). Because the Cities cannot reliably inform this tribunal about their future water needs, if any, the application cannot be approved.

The question of the Cities' future needs is addressed in the Harvey Economics' expert report. They find that the amount of water sought by the Cities is materially in excess of their reasonable needs. Harvey projects that the City of Hays would need no more than an additional 180 acre-feet supply by 2040.

Hays' population grew by 0.65 percent per year from 1980 through 2020, but the City's growth slowed to an average of 0.29 percent per year over the course of the most recent decade (2010 to 2020). State projections suggest a 0.34 percent average annual growth rate for Ellis County through 2045. For the sake of scenario planning, HE will apply the 0.34 percent growth rate to Hays through 2040. This will result in a 2040 population of about 22,110, an increase of about 6.3 percent from Hays' 2021 population estimate.

Water use patterns for Hays averaged 86 gpcd from 2008 through 2021, although gpcd trends in Hays are declining. HE will adopt the 86 gpcd for purposes here.

Applying the Hays population projections to the gpcd assumption, the 2040 water demands for Hays would amount to 2,136 acre-feet. This would be an increase of about 180 acre-feet compared with water production in 2022.

Harvey Report Page 5-2 (27).

C. WHETHER THE CITIES CAN FINANCE THE WATER TRANSFER PROJECT IS AT BEST AN ANCILLARY CONSIDERATION

It is apparent from a review of the application and other sources that (i) the Cities do not know how much water they will need in the future; (ii) they do know that they do not need the amount of water they are seeking to transfer in this proceeding; and (iii) the request is driven by financing considerations rather than demonstrable water needs. This from the application: "Financing for the Project will require amortization over the entire design life of the Project. The Cities do not believe that long-term financing for the Project will be available if the full quantity of water from the R9 Ranch that is available for

municipal use is not approved. . . .” *Application at 45*. But for water law purposes the availability of financing is at best an ancillary issue. The pole star is always reasonable need and beneficial use. *Cf.*, KSA 82a-707(e) (“Appropriation rights in excess of the reasonable needs of the appropriators shall not be allowed.”); *State, Dep’t of Ecology v. Theodoratus*, 135 Wash. 2d 582, 595, 957 P.2d 1241, 1248 (1998) (“Nevertheless, under the current statutes and this court’s recent water law decisions actual beneficial use must occur before a water right certificate may be issued. No authority is cited to us for the proposition that financial risks and ability to obtain financing justify redefining beneficial use.”).

D. THE VOLUME OF WATER THE CITIES SEEK TO TRANSFER IS UNSUSTAINABLE AND WILL ULTIMATELY RESULT IN A BUY AND DRY SCENARIO⁸

The Cities’ water needs are one overarching side of the equation. The right-hand side of the equation is the critical question of sustainable withdrawal rates. Intervenor’s expert⁹ will provide cogent evidence that sustainable withdrawals would fall in a range of 2000 to 2700 acre-feet per year. Pumping that exceeds those figures will have a deleterious effect on the aquifer and, because the Cities do not need the water, is an exercise in waste likely to result in future impairment violative of the Act. Water Transfer Act at K.S.A. 82a-1502(b) (“No water transfer shall be approved under the provisions of

⁸ Buy and Dry is discussed in the Conclusion, *infra*.

⁹ Mr. Larson’s CV is attached as Exhibit 3.

this act: (1) If such transfer would impair water reservation rights, vested rights, appropriation rights or prior applications for permits to appropriate water[.]”¹⁰

Groundwater serves as a vital resource for sustaining agricultural production, particularly in areas heavily reliant on irrigation. The High Plains Aquifer plays a crucial role in supplying 30% of the nation’s irrigated groundwater, with the Kansas portion supporting the congressional district characterized by the highest market value for agriculture nationwide. The Chief Engineer is duty-bound to conserve that aquifer as a resource. *See Audubon of Kansas, Inc. v. United States Dep't of Interior*, 67 F.4th 1093, 1107 (10th Cir. 2023) (“The Water Division enjoys limited discretion under Kansas law, but it always must protect senior water rights above junior rights. See § 82a-706 (explaining that the chief engineer must ‘control, conserve, regulate, allot, and aid in the distribution of the water resources of the state ... in accordance with the rights of priority of appropriation’)”.)

Based on existing trends, approximately 30% of the groundwater has already been pumped, and it is projected that another 39% will be depleted within the next 50 years.¹¹ These projections allow for an assessment of when the study area might run out of water. The study indicates that recharge currently supplies only 15% of the current pumping rate.

¹⁰ See also John C. Peck, *Evolving Water Law and Management in the U.S.: Kansas*, 20 U. Denv. Water L. Rev. 15, 23 (2016).

¹¹ *Tapping Unsustainable Groundwater Stores For Agricultural Production In The High Plains Aquifer Of Kansas, Projections to 2110* <https://www.pnas.org/doi/10.1073/pnas.1220351110#supplementary-materials> (Last accessed 7.12.2023).

In the event of complete depletion, it would take an average of 500-1,300 years to fully replenish the aquifer. The study further emphasizes the finite nature of the resource and encourages ongoing conservation efforts to promote long-term sustainability and the preservation of agricultural productivity.

E. RELIABILITY

Finally, it is notable that the professional support the Cities offer for their application is to a significant degree supplied in the form of (i) testimony and reports by individuals employed by Burns and McDonnell and (ii) the former Chief Engineer who presided over the closely related R9 change of use proceeding and who appeared to solicit a business relationship with the City of Hays and its counsel.

As to Burns & McDonnell, it is the principal contractor retained by the Cities to design various elements of the water transfer infrastructure. Approval of the project will result in significant remuneration for the firm. This is taken from the City Manager's May 4, 2023 memorandum to the Hays City Commission.

Summary

City staff is requesting that the Commission approve contracts with Burns & McDonnell for design engineering services for the R9 Wellfield and Pipeline Projects. The Wellfield Professional Services Agreement is in the amount of \$3,970,685. The Pipeline Agreement is in the amount of \$4,058,683.

And as to the Chief Engineer, his email to the Hays City Manager and the City's counsel (and others) is attached as Exhibit 1.

III. THE LAW

A. APPROVAL OF THE CITIES' WATER TRANSFER APPLICATION IS PRECLUDED BY THE PRINCIPLES AND REQUIREMENTS OF THE ANTI-SPECULATION DOCTRINE

The anti-speculation doctrine, effectively adopted by Kansas,¹² prohibits the acquisition of a conditional water right without a vested interest or a specific plan to possess and control the water for a particular beneficial use. It ensures that water appropriation is driven by genuine need rather than speculative intentions. Merely storing water for future use without immediate beneficial use is considered speculative hoarding and violates the anti-speculation policy.

The anti-speculation doctrine is a fundamental component of the prior appropriation system. All western water codes encapsulate the “doctrinal trinity of beneficial use, waste, and forfeiture.” “Statutes of nine states intone in nearly identical language that ‘beneficial use, without waste, is the basis, measure, and limit of a water right,’ and the remainder refer in some way to beneficial use.” Janet C. Neuman, *Beneficial Use, Waste, and Forfeiture: The Inefficient Search for Efficiency in Western Water Use*, 28 ENVTL. L. 919, 962-63 (1998). Kansas doctrine is in accord. “[T]he KWAA dedicates water resources to the use of the public, prohibits water rights in excess of the reasonable needs of the appropriators, and subjects water rights to the principle of beneficial use.” *Shipe, supra*.

The foundational principles in the anti-speculation doctrine and Kansas law align with the core tenets of western water law, which prioritize optimal use, efficient water

¹² See footnote 3 *supra*.

management, and the administration of water rights based on priority, while discouraging speculation and waste. *See, e.g.*, K.S.A. § 42-308 (rights not used for three years forfeited); K.S.A. § 82a-718 (rights not used for five years “without due and sufficient cause” deemed abandoned, but multiple and lenient exceptions exist to prevent forfeiture); *Frick Farm Props. v. Kansas Dept. of Agric.*, 190 P.3d 983 (Kan. App. 2008). The doctrine is a logical adjunct to the prior appropriation regimen which recognizes that water in Kansas is a limited and valuable resource. The system operates under the premise that the right to use water does not equate to the right to waste it. Waste of water is defined in Kansas to mean any of the following:

[A]ny act or omission that causes any of the following:

- (1) The diversion or withdrawal of water from a source of supply that is not used or reapplied to a beneficial use on or in connection with the place of use authorized by a vested right, an appropriation right, or an approval of application for a permit to appropriate water for beneficial use;
- (2) the unreasonable deterioration of the quality of water in any source of supply, thereby causing impairment of a person’s right to the use of water;
- (3) the escaping and draining of water intended for irrigation use from the authorized place of use; or
- (4) the application of water to an authorized beneficial use in excess of the needs for this use.

K.A.R. 5-1-1 (mmmm).

The Cities’ attempt to transfer water in amounts that greatly exceed their reasonable needs is the archetype for waste as defined.

Two landmark cases from Colorado, *Pagosa I*¹³ and *Pagosa II*,¹⁴ have shaped the legal framework surrounding conditional water rights and water appropriation in Colorado and throughout the western states and are edifying in the present milieu. These cases provide essential guidance on the requirements and considerations for granting conditional water rights and the obligations of cities seeking long-term water supplies.

Pagosa I established three essential elements that a governmental water supply agency must demonstrate to make a non-speculative conditional appropriation: (a) a reasonable water supply planning period, (b) substantiated population projections based on normal growth rates, and (c) a reasonable estimation of unappropriated water necessary to meet the agency's anticipated needs during the planning period.

Pagosa II introduced four non-exclusive factors to consider when determining the amount of a conditional water right: (a) implementation of water conservation measures, (b) expected land use patterns, (c) attainable per capita usage projections, and (d) the amount of consumptive use required to serve the increased population.

Because they are largely incorporated, the factors identified in *Pagosa I* and *II* are familiar to students of the Kansas Water Transfer Act and its implementing regulations. *See* K.A.R. 5-50-2(s) (“To be complete, a water transfer application shall show... the projected water needs of the applicant and of any other entities to be supplied water by the applicant, and the basis for those projections[.]”) A municipality seeking to

¹³ *Pagosa Area Water and Sanitation Dist. v. Trout Unlimited*, 170 P.3d 307 (2007).

¹⁴ *Pagosa Area Water and Sanitation Dist. v. Trout Unlimited*, 219 P.3d 774 (2009).

appropriate water based on projected population growth within a reasonable planning period must reliably demonstrate its future water requirements supported by substantiated growth projections within its service area. *Upper Yampa Water Conservancy Dist. v. Dequine Family L.L.C.*, 249 P.3d 794 (Colo. 2011). Here the Cities have done neither. They cannot knowledgeably articulate their future water needs and their population projection expert, coupled with the Harvey Report, entirely undermines the 2% growth rate upon which their transfer application is premised.

B. The Cities’ Failure to Obtain a Water Needs Analysis is Ruinous to Their Water Transfer Application

An applicant under the Water Transfer Act is, for evident reasons, required to provide information documenting its projected water needs together with the basis for the projections. K.A.R. 5-50-2(s). The applicant is further obliged to provide an analysis showing the “projected per capita per day usage of any public water supply user to be supplied water by the applicant.” K.A.R. 5-50-2(w). The Application and the City Manager’s deposition reveal that the Cities have done neither. It is incumbent upon an applicant to conscientiously comply with its regulatory obligations. The failure to do so must have consequences. Here those consequences should be dismissal or denial of the Application as was contemplated in analogous circumstances in *Bushno, supra*. Absent summary disposition, this tribunal is left with the untenable option of proceeding without the information necessary to assess the Cities’ water needs and, in that data vacuum, attempting to determine whether to grant the application as presented or to approve a

lesser transfer amount.¹⁵

The Application as presented simply does not enable this tribunal to render the required findings of fact, conclusions of law and policy reasons for its decision. “Applications under the Water Transfers Act are covered by the Kansas Administrative Procedure Act, K.S.A. 77–501 et seq. K.S.A. 82a–1503(c). K.S.A. 77–526(c) provides: ‘A final order or initial order shall include, separately stated, findings of fact, conclusions of law and policy reasons for the decision if it is an exercise of the state agency’s discretion, for all aspects of the order.’” *Water Dist. No. 1 of Johnson Cnty. v. Kansas Water Auth.*, 19 Kan. App. 2d 236, 241, 866 P.2d 1076, 1080 (1994).

An administrative agency must assume the responsibility of expressing the basic facts on which it relies with sufficient specificity to convey to the parties, as well as to the court, an adequate statement of the facts which persuaded the agency to arrive at its decision. Thus, there must be findings on all applicable standards which govern the agency’s determination, and the findings must be expressed in language sufficiently definite and certain to constitute a valid basis for the order, otherwise the order cannot stand. *Kansas Public Service Co. v. State Corporation Commission*, 199 Kan. 736, 744–745, 433 P.2d 572 (1967). Findings of ultimate fact expressed in the language of the applicable statute are not enough in the absence of basic findings to support them. *Cities Service Gas Co. v. State Corporation Commission*, 201 Kan. 223, 230, 440 P.2d 660 (1968).

Id. at 241-242 (citing *Blue Cross & Blue Shield v. Bell*, 227 Kan. 426, 433–34, 607 P.2d 498 (1980)).

C. Hope Is Not a Strategy

Careful review of the Application and consideration of the City Manager’s deposition

¹⁵ “The presiding officer may order approval of a transfer of a smaller amount of water than requested upon such terms, conditions and limitations as the presiding officer deems necessary for the protection of the public interest of the state as a whole.” K.S.A. 82a-1504(a).

reveal that the Cities have embraced a monumental project without adequate substantiation and documentation of various key components of a successful plan. They do not know their future water needs and have relied upon a flawed projection of population growth. They have only a vague notion of how the 135 million dollar cost of the project will be financed.¹⁶ And the Application does not identify commitments from any entity, conditioned upon approval of the water transfer, to grow an existing enterprise, move a business or start a new business in the Cities. What the Cities have done is to make unsubstantiated assumptions regarding the presumptive effects of approval of the transfer project on future economic and population growth. But neither the anti-speculation doctrine nor the underlying principles embodied in the Water Transfer Act countenance movement of vast quantities of scarce and valuable water based on optimism alone. “Facts are stubborn things; and whatever may be our wishes, our inclinations, or the dictates of our passion, they cannot alter the state of facts and evidence.” John Adams, *The Portable John Adams*.

IV. CONCLUSION

The practice of purchasing farmland and permanently transferring the water rights to a municipality's water portfolio is called “buy and dry.” Zoe Verhoeven, *Water Leasing*

¹⁶ “Q And does the City know how it's going to pay for the cost of this project? A I can't speak for the City. As the city manager, I know how we're going to pay for this project. Q And how is that? A This project will be paid for by money we have in the bank via a water sales tax that was passed in the late '90s. Q Let's stop there for a second, how much money is that? A I do not know without consulting an audit report, but it is in the 40 million and change. standpoint right now.” *Dougherty, Toby*, (Page 56:5 to 56:19).

Under the Agricultural Water Protection Water Right, 22 U. DENV. WATER L. REV. 41, 42 (2018). The buy and dry practice is an existential concern throughout western states. “If buy and dry in Colorado continues at the current rate, the South Platte River Basin could lose up to one-third of today's irrigated land by 2050. The Arkansas River Basin could lose up to seventeen percent of its total irrigated acreage, and the main-stem of the Colorado River watershed could lose up to twenty-nine percent of its irrigated land.” *Id.* at 43. The plan under consideration here is the Kansas iteration of the phenomenon. Evidence will be presented to demonstrate the expected damaging effect on the aquifer if the Application is approved. Since the Cities concede they do not need the amount of water they are seeking authority to transfer, realistic concerns regarding aquifer depletion deserve heightened consideration.

The Water Transfer Act is fundamentally designed, in part, to serve as a check on large scale interbasin transfers in the absence of demonstrable need. Yet here the Cities do not know how much water they need because they have not undertaken a professional needs assessment. The Application is premised upon a population growth projection that is grossly in error. Common sense, familiar principles of Kansas water law and the core requirements of the anti-speculation doctrine require substantiated information about both concepts.

Given the currently projected infrastructure costs of 134.9 million dollars¹⁷ and the

¹⁷ Roughly equal to a per capita cost for the combined populations of Ellis and Russell counties of \$3,655.00.

lack of reliable water needs or population data, it is difficult to discern any net benefit to either the citizens of Hays and Russell or the State of Kansas. Per the Harvey report:

This scenario analyses of the Cities' net future water need strongly suggest that the Cities will need much less water in the foreseeable future than they have indicated in the KWTA Application and the Reasonable-Need Limitations derived previously. This fact has important implications when considering the benefits of the project.

The R9 Ranch project will entail substantial up-front expenses, including the development of the wellfield and construction of a pipeline. Current estimates place project costs at \$134.9 million by 2025.¹⁸ Additional costs associated with water treatment and pumping may also apply. Without much future growth, there is a high likelihood that the costs of this project and the water supply it provides will be borne largely or even entirely by the existing customers of the Hays and Russell water systems. These customers will very likely experience major increases in their water rates with little or no benefit. Hence, the R9 Ranch project will very likely result in a net cost to the water ratepayers of Hays and Russell. If water rates do not increase substantially, the financing of the project is brought into serious question.

In sum, the R9 Ranch project as presently described in the KWTA Application produces a net cost to the Cities and the State of Kansas.

The Cities have failed to comply with mandatory provisions in the Water Transfer Act and the attendant regulations, have not demonstrated a need for the water they seek, and cannot effectively refute the evidence that the plan they propose will adversely affect the source aquifer and those that rely upon it. The Application should be denied and the tribunal should grant any other relief to which, under law or equity, Intervenors may be entitled.

¹⁸ *The Cities' Response to Water PACK's and Edwards County's Motion for Leave to File First Amended Joint Petition for Intervention, December 23, 2022.*

Dated July 14, 2023
Overland Park, Kansas

LEE SCHWALB LLC

By/s/Charles D. Lee

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County, Kansas

CERTIFICATE OF SERVICE

I hereby certify that on July 14, 2023, the foregoing was electronically served to all counsel of record by email as follows:

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ATTORNEY FOR THE KANSAS DEPARTMENT OF
AGRICULTURE

/s/ Charles D. Lee

EXHIBIT 1
Barfield Solicitation

From: "David Barfield" <david@kwrconsulting.com>

Date: April 2, 2020 at 2:32:33 PM CDT

To: "Traster, David" <dtraster@foulston.com>, "Preheim, Lynn" <lynn.preheim@stinson.com>, "Brian Meier" <bmeier@burnsmcd.com>, "Dale Book" <debook@spronkwater.com>, "Eric Atkinson" <agguy@ksu.edu>, "Hal Scheuerman" <schrman@pld.com>, <Ag1stkh@pld.com>, "Hill, Mary C" <mchill@ku.edu>, <mike_oldham@fws.gov>, "Pete Gile" <ksbostwick@gmail.com>, "Richard Wenstrom" <rediscoveryii@hotmail.com>, "Steve Adams" <steve.adams@ks.gov>, <smetzger@ksu.edu>, "Toby Dougherty" <tdougherty@haysusa.com>, "Tom Adrian" <tom@aplawpa.com>, "Tony Willardson" <twillardson@wswc.utah.gov>

Subject: FW: GMD 1 Submits Wichita County LEMA Plan to the Chief Engineer

All,

As part of my part-time consulting business, I am staying informed on water resources issues affecting our state and seeking to inform/educate others on these issues. My principal means of doing this is this KWRC Newsletter (1-2 emails per week).

Below is today's issue on GMD 1's action last week to submit its **LEMA plan for Wichita County** to the chief engineer for consideration.

Let me know if you wish me to add you to the KWRC Newsletter list or sign up via the "KWRC Newsletter form" in the middle of my web site's home page at: <https://kwrconsulting.com/>

Thanks.

David

David Barfield
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785-843-9207 office
785-766-2105 cell
david@kwrconsulting.com
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EXHIBIT 2
Harvey and Walker Curricula Vitae



Edward Harvey, Harvey Economics

Ed Harvey has devoted the bulk of his career to studying the economic effects of water, mineral, energy and environmental resource use and community changes in the western U.S. During his 50-year career, Mr. Harvey has completed financial feasibility studies, rate studies, economic impact studies, analyses of future resource demands and resource valuation studies. He conducts economic studies related to water availability, drought, water quality, infrastructure development, irrigation, water conservation and non-structural water resource issues. Mr. Harvey created the natural resource economics practice at BBC Research & Consulting in 1973 and served as a Managing Director from 1981 until 2002 when he formed Harvey Economics.

YEARS EXPERIENCE

Total **50**

At Harvey
Economics **20**

EDUCATION

MSBA, Economics,
University of Denver

BA, Economics,
University of Denver

PROFESSIONAL AFFILIATIONS

Colorado Commission
for Judicial
Performance

AWWA

Colorado Water
Congress

American Planning
Association

LOCATION

Denver, CO

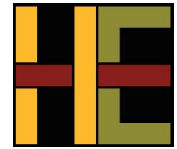
Select Project Experience

Halligan Water Supply Project EIS, Colorado. Mr. Harvey is leading the development of multiple components of this EIS, focused on the expansion of Halligan Reservoir in northern Colorado. In addition to developing long-term water demand projections for the City of Fort Collins, Mr. Harvey also led an evaluation of the impacts of the proposed reservoir expansion and project alternatives to socioeconomic, recreational and land use resources. HE's impact analysis addressed such topics as changes in regional agricultural operations, changes in recreational activity levels and the effects of construction activity on local residents.

Moffat Collection System Project EIS, Colorado. Mr. Harvey led the economic, demographic and social impact analysis of the Moffat EIS under the direction of the U.S. Army Corps of Engineers. This project focused on the expansion of an existing water supply reservoir for Denver Water. Mr. Harvey explored the purpose and need for the project and examined the socioeconomic impact of a host of alternatives, addressing construction economic benefits, tourism impacts, other economic impacts, public facility and social service impacts, fiscal impacts, environmental justice, and water rate effects. In addition, Mr. Harvey directed the preparation of economic, demographic and water demand projections for incorporation into Denver Water's 2002 Integrated Resource Plan.

Lake Ralph Hall EIS, Texas. Mr. Harvey led the development of water demand projections and evaluation of project purpose and need for the Upper Trinity Regional Water District as part of this EIS, concerning construction of the Lake Ralph Hall Reservoir in rural Fannin County, Texas. That effort involved detailed understanding of regional demographic and economic trends and future conditions, as well as knowledge of current water use patterns and future conservation efforts of participating water providers. Mr. Harvey also led the socioeconomic, recreation and land use impact analyses for the proposed reservoir development.

Windy Gap Firing Project EIS, Colorado. Mr. Harvey led the Harvey Economics team in developing 50-year water demand projections for the purpose and need statement of this EIS, working as the third party contractor to Northern Water and U.S. Bureau of Reclamation. The project involved 14 participants in a proposed



Edward Harvey, Continued

water supply project in the northern Front Range of Colorado. HE developed independent projections of those participants' future water demands, considering each participant's conservation efforts.

Northern Integrated Supply Project (NISP) EIS, Colorado. Under Mr. Harvey's direction, Harvey Economics developed the water demand and conservation components used to evaluate Purpose and Need for the NISP EIS. This USACE led EIS focused on a proposed project involving more than a dozen participants, reflecting a wide range of water demands and water use characteristics. HE's research approach entailed extensive data collection, evaluation and analyses of information provided by the participants and conclusions about future water demands and need for NISP.

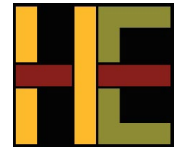
White River Reservoir Feasibility Study, Colorado. Mr. Harvey assessed the need for and economic benefits of a proposed new reservoir in Rio Blanco County. This two-part effort for the Rio Blanco Water Conservancy District entails an analysis of current and future water demands and additional water storage facilities in the region. The second phase of this work includes quantification of benefits and an assessment of the ability of beneficiaries to pay for the project. Hydropower, recreation and environmental benefits are important elements of the financial feasibility study. Projections of visitor spending and associated fiscal benefits to local jurisdictions over a 50-year period were developed.

Douglas County Rural Water Plan, Colorado. Mr. Harvey completed the economic and financial components of this study for the Douglas County Rural Water Authority, focused on evaluation of rural wells reliance on declining groundwater resources. The study explored the feasibility of creating a regional water supply and distribution system using surface water. Mr. Harvey developed population and water demand projections, a comparative benefit-cost analysis, and a financial feasibility study. The purpose of this work was to provide a county-wide rural water supply system that would minimize environmental impacts, be economically feasible, energy sustainable, and that would meet the long-term water supply goals and objectives of county water suppliers.

Big Chino Water Demands, Arizona. Mr. Harvey led the effort to examine the economic ramifications of a water transfer from a ranch to the Prescott Valley communities in an inter-basin transfer. Growing communities outside the basin sought to transfer water from the Basin to establish assured water supply. We examined water demand needs and financial implications in the Big Chino Basin in Yavapai County, Arizona. Mr. Harvey provided expert testimony to the Arizona Department of Water Resources regarding water demand and financing issues. Financial feasibility of the project was a focus.

Snake-Salt River Basin Planning Study, Wyoming. Mr. Harvey prepared water demand projections for this basin study in north-western Wyoming, which included Jackson Hole. An extensive evaluation of the tourism industry and future prospects by activity type was part of his work. He projected economic and demographic conditions for Teton and Lincoln Counties. These projections formed the basis for projections of municipal, agricultural, recreational and environmental water use. These projections were utilized to evaluate water supply needs and development options. Mr. Harvey made three presentations to the Basin Advisory Group and led forecasting methodology discussions.

Upper Gunnison Demand Management Impact Study, Colorado. Mr. Harvey completed this study focused on the regional economic impacts of a potential loss of irrigation water due to curtailments related to the Colorado River Basin shortages. The initial stages of this work included an understanding of the types of demand management programs relevant to agricultural water use; the agricultural characteristics and operations of the District at the micro-level; and other sectors potentially affected by changes in agricultural water



Edward Harvey, Continued

consumption (domestic water use, recreation, environmental resources). The effects of stream flow changes on environmental resources were also addressed as part of the study.

Arkansas Valley Alternative Transfer Mechanisms (ATM) Projects, Colorado. Mr. Harvey has completed a variety of work in the Arkansas Valley over many years on behalf of the City of Aurora. Relevant projects include evaluation of shared land and water ownership models between the municipality and farmers; evaluation of other types of lease agreements and water purchases; and assessment of the “tipping point” of impacts to local agricultural communities and economies as the result of water leases.

San Luis Valley Groundwater Fees, Colorado. Mr. Harvey served as an expert economic witness in an arbitration between irrigators grappling with the allocation of groundwater supplies in the face of shortages. Harvey Economics completed an analysis of groundwater pumping fees for the certain members of the Rio Grande Water Conservation Sub-District. Mr. Harvey examined agricultural water use, yields, operating costs and profits for growers in this area. Ability to pay was a critical issue. Harvey testified at the arbitration hearing.

Arizona Water Transfers. In the first inter-basin water transfer case in Arizona, Mr. Harvey represented La Paz County and demonstrated the scope of economic effects associated with large transfers of irrigation water from rural areas to urban centers. Mr. Harvey quantified the economic effects of major ground water transfers for Arizona. This work contributed to compromises, mitigation measures and eventual regulation. In a separate case, he also provided expert testimony regarding groundwater withdrawals in Northern Maricopa County

Animas La Plata Feasibility Study, Colorado. Mr. Harvey determined the need for additional water supplies for a region of southwestern Colorado as part of an on-going project to develop conditional water rights. He also completed financial analyses of several specific projects designed to develop those rights.

Cache la Poudre Diligence Cases, Colorado. Mr. Harvey testified on behalf of Northern Water in the Thornton water transfer case regarding water demands and population projections. He prepared for a diligence case for Northern Water related to conditional rights in the Cache la Poudre River Basin.

Valuation, Utilization and Transfer of BOR Assets, Kansas and Nebraska. Mr. Harvey provided technical consulting and negotiation support to assist in reaching an agreement among the Western U.S. water and electric power utilities. In the early 2000's, HE established a value for a number of Nebraska and Kansas water district interests in Bureau of Reclamation facilities as part of negotiations.

Additional Legal Support Experience

Expert Witness and Deposition Experience. Mr. Harvey has extensive practice preparing for and serving as an expert witness in legal cases and providing deposition in support of water rights cases, agricultural matters, and other economic topics.

Office of Judicial Performance Evaluation, Colorado. Mr. Harvey served as Vice Chair and eventually Chair of Judicial District Commissioners for the State of Colorado. The mission of this appointed commission is the evaluation of all Colorado's appellate judges. In this role, a primary responsibility is the oversight, review and application of a large survey of lawyers, prosecutors, litigants, witnesses, juries and court personnel within the State's 22 judicial districts. Commissioners are responsible for evaluating judges through courtroom observations, reviewing case data, conducting interviews and surveys as the basis for forming retention recommendations for each judge that are shared with local voters.



Susan H. Walker, Harvey Economics

Ms. Walker is a firm Director at Harvey Economics and has been with the company since 2005. Her work largely focuses on planning endeavors related to water, energy, tourism and other natural resource sectors. Ms. Walker's project experience includes rate studies, demand projections, socioeconomic impact analysis, cost – benefit analysis, project financing and valuation of resources and facilities. She is an expert at economic and demographic research, analysis and modeling. Ms. Walker has completed work for municipalities, utilities, special districts and private industry, as well as county, state and federal agencies.

YEARS EXPERIENCE

Total **20**

At Harvey
Economics **18**

EDUCATION

MS, Forest Economics,
Colorado State
University

BS, Forest
Management,
University of Vermont

PROFESSIONAL AFFILIATIONS

AWRA

AWRA CO

Colorado Water
Congress

LOCATION

Denver, CO

Relevant Project Experience

BennT Creek Regional Water Authority Growth Projections, Colorado.

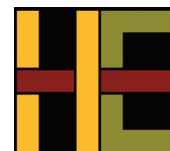
Ms. Walker developed projections of housing unit growth for the Authority's current and future water service areas located within Adams, Weld and Arapahoe counties. Growth projections developed over a 50-year time period incorporated information obtained from real estate developer interviews; state and county planning documents; local zoning and density regulations; known planned developments; historical growth trends and other information about future economic growth and prospects in this area of Colorado. Housing unit projections were used by Authority engineers to develop projections of future water demands as part of a water rights court case.

Morgan County Quality Water District Growth Study, Colorado.

Ms. Walker completed a study for a rural water district focused on projections of population and economic growth in Morgan County and future water demands for the District. Located in northern Colorado, the District serves a large rural residential and agricultural area, including several small communities and many large dairies. Based on an understand of the economic and demographic factors influencing regional growth, Ms. Walker developed projections of the District's residential, commercial, industrial and agricultural customers over a 50-year period and applied appropriate water use patterns to customer data to estimate future water demands.

Eagle County Water Demand Projections, Colorado. Ms. Walker is currently working with the Eagle River Water & Sanitation District (District) and Upper Eagle Regional Water Authority (Authority) to prepare projections of water demands over the next 50 years. Ms. Walker researched historical and projected regional and local population growth and economic conditions to project future households served by each entity. Recent historical water use patterns, anticipated conservation savings and estimated water losses were incorporated into Ms. Walker's water demand model. Raw water irrigation demands were also included in the projections. The demand projections effort also considers information about the District's and Authority's service area boundaries, physical system and required safety factor. In conjunction with data on the District's and Authority's current supplies and firm yield, the projected demands will allow for a calculation of future project need.

Halligan Water Supply Project EIS, Colorado. Ms. Walker's work on the Halligan EIS includes the development of population and water demand projections for the City of Fort Collins in order to support the purpose and need for the proposed expansion of Halligan Reservoir. Those projections were based on projections of regional economic and demographic conditions, growth patterns and water use trends. Ms. Walker



Susan H. Walker, Continued

also completed an evaluation of socioeconomic, recreational and land use effects of the proposed project. Those analyses quantify impacts to agricultural activity; area residents and businesses; water rates and tap fees; traffic volume and transportation patterns; and changes to local recreational amenities, activity levels, experiences and the local recreational economy.

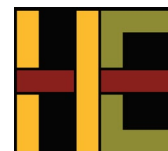
White River Reservoir Project Need and Financial Feasibility, Colorado. Ms. Walker evaluated the need for and economic benefits of a potential new reservoir in western Colorado. She conducted an analysis of future water demands for municipal use, energy development, recreation and agricultural use and worked to quantify benefits to each sector from additional regional water storage. Using projected capital and operating costs, Ms. Walker completed a benefit cost analysis for three alternatives. A financing plan identified potential project partners, associated benefits and cost shares.

Parker Water Project Need and Financial Feasibility, Colorado. The Parker Water and Sanitation District (PWSD) and the Lower South Platte Water Conservancy District (LSPWCD) developed a joint plan for developing, storing and transmitting water from the South Platte River. Harvey Economics prepared a report addressing both the need for the project and its financial feasibility. Ms. Walker's work focused on evaluation of PWSD's future water needs. She reviewed existing reports, documents and other data sources describing historical and anticipated growth and water demands and conducted additional secondary research to verify or validate future economic and demographic conditions for Douglas County and the Parker area and assumptions underlying the determination of project need. Review of PWSD's water conservation plan was also a focus.

Chino Valley Water Demands and Water Pipeline, Arizona. Ms. Walker researched current water use trends in Yavapai County, Arizona and estimated future per capita water use as part of Harvey Economics' effort to project future water demand for the Chino Valley. Estimates of future water use take into account projected population growth, commercial development and employment trends for the area, which are based on an understanding of the regional economy. Ms. Walker reviewed fiscal impacts of pipeline construction and delivery of water between the Chino Valley and the City of Prescott, Arizona. She also reviewed project cost data and the City's financial documents as part of Harvey Economics' work to assess the City's ability to finance the pipeline.

Platte River Basin Water Plan Update, Wyoming. As part of an update to the original Platte River Basin Plan for the Wyoming Water Development Commission, Ms. Walker developed water demand projections under three alternative future scenarios, including high, low and medium population growth and water use scenarios. She first created a profile of current economic and demographic conditions in the Basin, focusing on specific water use sectors. She then researched and projected future outlook scenarios for each of the Basin's important economic sectors and ultimately projected water demands under each scenario for the Basin as a whole and for each of the seven subbasins. This work included evaluation of both consumptive and non-consumptive environmental and recreational water demands.

Northern Integrated Supply Project EIS, Colorado. Ms. Walker evaluated the conservation programs of the 15 water providers that are participants in the Northern Integrated Supply Project (NISP) EIS. Located in northern Colorado, the NISP EIS focused on several water storage and distribution alternatives. Project participants include a mix of Front Range cities and water districts. Ms. Walker worked to determine the amount of water saved as a result of each participant's existing and anticipated future conservation programs. Estimates of conservation savings were incorporated into water demand projections through 2060.



Susan H. Walker, Continued

Upper Gunnison Demand Management Impact Study, Colorado. Ms. Walker quantified the regional economic impacts of potential water demand management programs within the Upper Gunnison Basin. That work included an understanding of the agricultural characteristics and operations of irrigators and other sectors potentially affected by changes in agricultural water consumption (domestic water use, recreation, environmental resources). Ms. Walker estimated changes in irrigated acres, hay production, cattle sales, revenues and expenses and built an economic model to estimate the economic impacts to individual ranches, each District sub-basin, and the Upper Gunnison Basin as a whole, including impacts to regional spending levels, employment, income and overall economic activity.

Alternative Agricultural Transfers Roundtable, Colorado. Ms. Walker provided Colorado's Alternative Agricultural Transfers Roundtable with information about financial concerns and other issues associated with water leasing programs. She provided information on the costs and benefits of alternative transfer programs, including administrative and operating costs to the parties involved and resource costs of purchasing a water lease. She identified third party benefits and beneficiaries and addressed costs that could be borne by the public or other groups. Ms. Walker also compared the economic impacts of alternative transfer programs to permanent dry-up conditions in local areas of agricultural importance.

Wall Reservoir and Dam Rehabilitation Project, Wyoming. Ms. Walker is working to complete a comprehensive benefit-cost analysis of dam rehabilitation activities aimed at reducing seepage and improving dam safety. She is working to describe and quantify the economic benefits associated with additional water for agricultural operations; expanded recreational opportunities; reduced risk of flood damage to properties, human life and agricultural acreage; development of wildlife habitat; and improved water quality. Benefits will be estimated for a period of 50 years, and then compared with project costs to determine feasibility.

Glendo Reservoir Full Utilization Study, Wyoming. Working for the Wyoming Water Development Commission (WWDC), Ms. Walker quantified the economic costs and benefits associated with re-operation of Glendo Reservoir. She evaluated costs and benefits to recreational amenities and State Park finances; hydropower generation; agricultural productivity and access to irrigation water supplies; and environmental amenities. This project involved the Bureau of Reclamation, US Army Corps of Engineers, the States of Wyoming and Nebraska, several State of Wyoming agencies and other stakeholders.

New Fork Lake Dam Enlargement, Wyoming. Ms. Walker completed economic analyses for a project intended to increase storage volume in the existing New Fork Lake, located near Pinedale, WY. For each of three alternatives, she evaluated the potential benefits to recreation, fisheries, public safety, flood control and fire suppression. Ms. Walker developed a series of 50-year benefit-cost models, incorporating all project costs and benefits, the largest of which were agricultural. Her evaluation of the irrigation district's ability to pay focused on varying grant/ loan splits and knowledge of current district finances.

Interstate Stream Commission Cost Benefit Study, New Mexico. This study, conducted for the Interstate Stream Commission, provided a basis for the funding of certain water development projects in New Mexico. For each project, Ms. Walker identified specific beneficiaries, annual water yields and detailed cost schedules. She worked to quantify the benefits of developed water to municipal and industrial uses, recreational activity, environmental uses and the agricultural industry. Using her estimates of project benefits and the available cost data, Ms. Walker developed a cost benefit model that incorporated the information for a period of fifty years and allowed for a comparison of costs and benefits over that period.

EXHIBIT 3
Larson Curriculum Vitae

STEVEN P. LARSON

Groundwater Hydrologist

AREAS OF EXPERTISE

- Groundwater Hydrology
- Contaminant Fate and Transport
- Site Investigation and Remediation
- Numerical Modeling
- Spatial Interpolation
- Expert Testimony

SUMMARY OF QUALIFICATIONS

Mr. Larson is a recognized authority on numerical simulation models and their application in the analysis of a variety of groundwater problems. He has developed such models for analyzing groundwater flow, mass- and heat-transport in groundwater systems, contaminant migration, recovery of petroleum products from groundwater, saltwater intrusion in coastal aquifers, and thermal energy storage in aquifers. In addition, he has been in the forefront of combining these methods with linear programming techniques to optimize the development of groundwater supplies or the remediation of contaminated groundwater. Mr. Larson has conducted training courses on the use of these models and provided technical support on their application to a variety of hydrologic conditions. He has authored and co-authored publications on the application of aquifer simulation models that are widely used by practicing hydrologists. He has served as an expert witness in numerous judicial forums regarding groundwater issues and the application of simulation models for demonstrating the fate of soil/groundwater contamination and the effect of remediation alternatives

REPRESENTATIVE EXPERIENCE

S.S. Papadopoulos & Associates, Inc., Bethesda, Maryland

As senior principal of the company, Mr. Larson assists in the management of the company and in the conduct and management of projects dealing with a wide variety of environmental and water-resource issues. During his many years at SSP&A, he has been involved in numerous projects covering a wide spectrum of technical, environmental, and legal issues including:

- **Site Evaluations** — Remedial investigations, feasibility studies, engineering evaluation/cost analyses, and remedial action plans at CERCLA and other waste disposal sites including the Stringfellow site in California, the FMC Fridley site in Minnesota, the Chem Dyne site in Ohio, the Conservation Chemical site in Missouri, the Hardage-Criner site in Oklahoma, and the Hastings site in Nebraska.
- **Groundwater Contamination Evaluations, CERCLA and Other Waste-Disposal Sites** — Love Canal, New York; Savannah River Plant, South Carolina; Tucson Airport, Arizona; Ottati & Goss site, New Hampshire; Martin-Marietta site, Colorado; and Western Processing site, Washington State.
- **Environmental Impact Evaluations of the Effects of Water Development**, Wyoming and South Dakota — For proposed coal slurry operations in Wyoming, of in-situ mining for trona minerals in Wyoming, and of groundwater development on the shallow-water-table in South Dakota.

YEARS OF EXPERIENCE: 40+

EDUCATION

MS, Civil Engineering, University of Minnesota – Minneapolis, 1971

BS, Civil Engineering (with high distinction), University of Minnesota – Minneapolis, 1969

REGISTRATIONS

Certified Professional Hydrologist

PROFESSIONAL HISTORY

S.S. Papadopoulos & Associates, Inc., Executive Vice President, 1980 to present

U.S. Geological Survey:

Water Resources Division, Reston, Virginia: Hydrologist, 1975–1980.

Water Resources Division, St. Paul, Minnesota: Hydrologist, 1971–1975

Water Resources Division – National Training Center, Denver, Colorado: Hydrologist, 1971.

St. Anthony Falls Hydraulic

Laboratory, Minneapolis, Minnesota: Research Assistant, 1969–1971.

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- **Water-Supply Development Evaluations** — Potential impacts of salt-water intrusion on water-supply development, in Oman, Portugal and Florida; and analysis of potential impacts of power-plant cooling water on groundwater and surface water in Wyoming.
- **Evaluations of Permitting, Licensing, and Environmental Issues Associated with Mining** — Coal mining in Wyoming, Montana, and Arizona; copper mining in Montana and Utah; trona mining in Wyoming; and uranium mining in New Mexico.
- **Evaluations of the Effects of Discharge on Groundwater from Chemical-Manufacturing Waste Disposal** — Wyoming, Virginia, and New York.
- **Water-Rights Permitting Evaluations and Adjudication** — New Mexico, Texas, Colorado, Kansas, Wyoming, Nebraska, Arizona, and Idaho.
- **Environmental Audits, Groundwater Monitoring Plans, and Other Environmental Investigations** — Oaks Landfill in Maryland, the FMC Carteret facility in Wyoming, the former IBM facility in Indiana, and the Insilco site in Florida.

SPECIFIC PROJECT EXPERIENCE

- **Far-Mar-Co Subsite, Hastings Site, Nebraska** — Supervised the preparation of an engineering evaluation/cost analysis (EE/CA) to support implementation of remediation of groundwater contamination. Worked with regulatory agencies to gain approval of the EE/CA and progress toward design and implementation. Previously, on behalf of Morrison Enterprises, supervised completion of a remedial investigation and a feasibility study involving carbon tetrachloride and ethylene dibromide contamination.
- **Stringfellow Site, near Riverside, California** — Served as the principal technical advisor on groundwater issues to the Pyrite Canyon Group that overviewed investigations and remedial activities sponsored by the responsible parties. Designed and evaluated several investigations and remediation programs. Represented the client as a technical spokesperson in workshops, technical seminars, and meetings with regulatory agencies and other interested parties. Prepared key documents to support the decision-making process toward the final Record of Decision.
- **In the case of *Kansas v. Colorado* before the U.S. Supreme Court** — Served on a team of technical advisors to the State of Kansas in its litigation with Colorado over violations of the Arkansas River Compact. Assisted in obtaining a finding of compact violation regarding the pumping of groundwater from wells along the river valley in Colorado. Continued as a technical expert as the case moves into subsequent phases involving the quantification of depletions of supply, assessments of damage, and future compliance by Colorado.

EXPERT AND FACT WITNESS EXPERIENCE

- Litigation associated with soil and groundwater contamination at CERCLA, RCRA, and other facility sites in California, Kansas, Missouri, Oklahoma, Tennessee, Montana, Florida, Iowa, and Nebraska.
- Toxic tort, property damage, and liability litigation regarding soil and groundwater contamination at sites or facilities in New York, Tennessee, Texas, Virginia, Ohio, and other states.
- Insurance recovery litigation associated with contamination at a variety of sites or facilities for commercial clients such as General Electric, FMC Corporation, Upjohn, AT&T, Rohr Industries, Beazer East/Koppers, North American Phillips, DOW Chemical, Occidental Chemical, and Southern California Edison.
- Water-rights permitting litigation and water adjudication including cases in New Mexico, Colorado, and Arizona, as well as interstate river compact disputes involving the states of Kansas, Colorado, Wyoming, and Nebraska.

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U.S. Geological Survey, Water Resources Division, Reston, Virginia

Originated, planned and conducted research in the development of numerical simulation models and techniques for the analysis of a variety of problems related to groundwater systems. Applied the developed models to actual field situations for verification and further refinement, and documented these models in a manner suitable for use by others. Served as coordinator and instructor for training courses on groundwater simulation models and methodologies conducted by the Division, and provided primary technical assistance to many groundwater projects conducted by District. Participated in and represented the Survey in national and international meetings. Conducted groundwater studies of national and regional interest, and participated in or was detailed to overseas projects conducted or managed by other U.S. agencies and the World Bank.

U.S. Geological Survey, Water Resources Division, St. Paul, Minnesota

Served as Project Chief and participated in studies involving the evaluation of groundwater resources, the assessment of stream-water quality, and the analysis of surface-water/groundwater relationships in various parts of Minnesota.

U.S. Geological Survey, Water Resources Division, National Training Center, Denver

Participated in an extended training program providing in-depth training on both office and field techniques for the collection and the analysis of data and the conduct of surface-water, groundwater, and water-quality studies.

St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minnesota

As a Research Assistant, participated in the development and operation of an urban-runoff model to predict sewer flow distribution for the Minneapolis–St. Paul Sanitary District. Assisted in runoff prediction studies for St. Paul and participated in a project to survey and summarize computer programs used in water resources engineering.

PROFESSIONAL SOCIETIES

Association of Ground Water Scientists and Engineers
American Institute of Hydrology

AWARDS AND HONORS

Civil Servant of the Year, U.S. Geological Survey, 1974
U.S. Geological Survey Incentive Award, 1974
American Society of Civil Engineering Student Award, 1969

PUBLICATIONS AND PRESENTATIONS

- Barth, G., S.P. Larson, G. Lewis, and K. Green, 2011. Prediction Uncertainty of Drawdown in the Seven-Rivers Augmentation Well Field. Presentation at the National Groundwater Association (NGWA) Conference 2011. Baltimore, MD. June 2011, 15.
- Spiliotopoulos, A., M. Karanovic, and S. Larson, 2008. Development of Transient Flow Models for the Solomon River Basin. Presentation at MODFLOW and More 2008: Ground Water and Public Policy Conference, May 18-21, 2008, Golden, CO.
- Papadopoulos, S.S., and S.P. Larson, 2007. The Drawdown Distribution in and Around a Well Pumping from a Two-Region Aquifer. Presentation at the 119th Annual Meeting of the Geological Society of America, Denver, CO, October 27-31, 2007. *in Abstracts and Programs*, v. 39, no. 6. p. 189. Geological Society of America, Boulder, CO.

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- Larson, S.P., 2007. The Use of Complex Computer Modeling of Groundwater Systems. Presentation at the 53rd Annual Rocky Mountain Mineral Law Institute, Vancouver, British Columbia, July 19-21, 2007. 21.
- Larson, S.P., 2006. Simplicity in Modeling — Use of Analytical Models with PEST. Presentation at MODFLOW and More 2006, Managing Ground-Water Systems, International Ground Water Modeling Center, Colorado School of Mines Golden, CO, May 22-24, 2006: v. 2, pp. 579-583.
- Tonkin, M.J., S. Larson, and C. Muffels, 2004. Assessment of Hydraulic Capture through Interpolation of Measured Water Level Data. Presentation at Conference on Accelerating Site Closeout, Improving Performance, and Reducing Costs through Optimization, U.S. Environmental Protection Agency, Federal Remediation Technology Roundtable, June 15-17, 2004, Dallas, TX.
- Tonkin, M.J. and S. Larson, 2002. Kriging Water Levels with a Regional-Linear and Point-Logarithmic Drifts: *Ground Water*, v. 40, no. 2 (March-April), pp. 185-193.
- Blum, V.S., S. Israel, and S.P. Larson, 2001. Adapting MODFLOW to Simulate Water Movement in the Unsaturated Zone. *in Proceedings of MODFLOW 2001 and Other Modeling Odysseys*, International Groundwater Modeling Center (IGWMC), September 11-14, 2001, Colorado School of Mines, Golden, Colorado, pp. 60-65.
- Larson, S.P., C. Andrews, and C. Neville, 1995. Parameter Estimation in Groundwater Modeling: Research, Development, and Application (Abstract). American Geophysical Union (AGU) Spring Meeting, Baltimore, May 30–June 2, 1995, Hydrology Sessions (invited speaker). S145, Abstract H51C-02 0835h.
- Andrews, C.B., and S. Larson, 1988. Evolution of Water Quality in the Lower Rio Grande Valley, New Mexico. *Eos*, v. 69, no. 16, p. 357.
- Larson, S.P., C. Andrews, M. Howland, and D. Feinstein, 1987. Three-Dimensional Modeling Analysis of Groundwater Pumping Schemes for Containment of Shallow Groundwater Contamination. *in Solving Ground Water Problems with Models*. Dublin, OH: National Water Well Association. pp. 517-536.
- Bennett, G.D., A. Kontis, and S. Larson, 1982. Representation of Multi-Aquifer Well Effects in Three-Dimensional Groundwater Flow Simulation. *Ground Water*, v. 20, no. 3, pp. 334-341.
- Helgesen, J.O., S. Larson, and A. Razem, 1982. *Model Modifications for Simulation of Flow Through Stratified Rocks in Eastern Ohio*. U.S. Geological Survey, Water-Resources Investigations 82-4019.
- Larson, S.P., S. Papadopoulos, and J. Kelly, 1981. Simulation Analysis of a Double-Transmissivity Concept for the Madison Aquifer System (abstract). *Proceedings of the 10th Annual Rocky Mountain Ground-Water Conference*, Laramie, Wyoming, April 30-May 2, 1981. p. 76.
- Mercer, J.W., S. Larson, and C. Faust, 1980. *Finite-Difference Model to Simulate the Real Flow of Saltwater and Fresh Water Separated by an Interface*. U.S. Geological Survey, Open-File Report, pp. 80-407.
- Mercer, J.W., S. Larson, and C. Faust, 1980. Simulation of Saltwater Interface Motion. *Ground Water*, v. 18, no. 4, pp. 374-385.
- Larson, S.P., 1978. *Direct Solution Algorithm for the Two-Dimensional Ground-Water Flow Model*. U.S. Geological Survey, Open-File Report 79-202, p. 25.
- Papadopoulos, S.S., and S. Larson, 1978. Aquifer Storage of Heated Water: Part II - Numerical Simulation of Field Results. *Ground Water*, v. 16, no. 4, pp. 242-248.
- Burnham, W.L., S. Larson, and H. Cooper Jr., 1977. *Distribution of Injected Waste-Water in the Saline Lava Aquifer, Wailuku-Kahului Waste-Water Treatment Facility, Kahului, Maui, Hawaii*. U.S. Geological Survey, Open File Report 77-469.
- Larson, S.P., T. Maddock III, and S. Papadopoulos, 1977. Optimization Techniques Applied to Ground-Water Development. Presentation at the Congress of the International Association of Hydrogeologists, Birmingham, England, July 24-30, 1977. *in Memoires*, 13, Part 1. E57-E66.

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- Larson, S.P., S. Papadopoulos, H. Cooper, Jr., and W. Burnham, 1977. Simulation of Wastewater Injection into a Coastal Aquifer System near Kahului, Maui, Hawaii. Presentation at the American Society of Civil Engineers' (ASCE) 25th Annual Hydraulic Division Specialty Conference on the Hydraulics in the Coastal Zone, Texas A&M University, College Station, TX, August 10-12, 1977. in *Proceedings - Hydraulics Division Specialty Conference*, v. 25, pp. 107-116.
- Larson, S.P., and P. Trescott, 1977. Solution of Water-Table and Anisotropic Flow Problems Using the Strongly Implicit Procedure: *Journal of Research of U.S. Geological Survey*, v.5, no. 6, pp. 815-821.
- Trescott, P.C., and S. Larson, 1977. Comparison of Iterative Methods of Solving Two-Dimensional Ground-Water Flow Equations. *Water Resources Research*, v. 13, no. 1, pp. 125-136.
- Trescott, P.C., and S. Larson, 1977. Solution of Three-Dimensional Ground-Water Flow Equations Using the Strongly Implicit Procedure. *Journal of Hydrology*, v. 35, pp. 49-60.
- Larson, S.P., 1976. *An Appraisal of Ground Water for Irrigation in the Appleton Area, West-Central Minnesota*. U.S. Geological Survey, Water Supply Paper 2039-B, p. 34.
- Larson, S.P., W. Mann IV, T. Steele, and R. Susag, 1976. *Graphic and Analytical Methods for Assessment of Stream-Water Quality: Mississippi River in the Minneapolis - St. Paul Metropolitan Area, Minnesota*. U.S. Geological Survey, Water Resources Investigations Open-File Report 76-94. 55.
- Trescott, P.C., and S. Larson, 1976. *Supplement to Open-File Report 75-438 – Documentation of Finite-Difference Model for Simulation of Three-Dimensional Ground-Water Flow*. U.S. Geological Survey, Open-File Report 76-591. 21.
- Trescott, P.C., G. Pinder, and S. Larson, 1976. *Finite Difference Model for Aquifer Simulation in Two Dimensions with Results of Numerical Experiments*. Automated Data Processing and Computations. Techniques of Water-Resources Investigations Book 7. Chapter C1, p.116.
- Larson, S.P., M. McBride, and R. Wolf, 1975. *Digital Models of a Glacial Outwash Aquifer in the Pearl-Sallie Lakes Area, West-Central Minnesota*. U.S. Geological Survey, Water Resources Investigations 75-40. 39.
- Larson-Higdem, D.C., S. Larson, and R. Norvitch, 1975. *Configuration of the Water Table and Distribution of Downward Leakage to the Prairie du Chien/Jordan Aquifer in the Minneapolis -St. Paul Metropolitan Area*. U.S. Geological Survey, Open-File Report 75-342. 33.
- Bowers, C.E., A. Pabst, and S. Larson, 1972. *Computer Programs in Hydrology*. University of Minnesota, Water Resources Research Center Bulletin 44. 172.
- Bowers, C.E., A. Pabst, and S. Larson, 1971. *Computer Program for Statistical Analysis of Annual Flood Data by the Log-Pearson Type III Method*. University of Minnesota, Water Resources Research Center Bulletin 39. 26.

DEPOSITION AND TESTIMONY EXPERIENCE

DEPOSITIONS

- 2018 James Blocker and Jami Blocker, et al. vs. ConocoPhillips Company. U.S. District Court for the Western District of Oklahoma. Case No. CIV-17-248-D. July 10.
- 2017 State of Mississippi vs. State of Tennessee, City of Memphis and Memphis Light, Gas, & Water Division. U.S. Supreme Court. No. 143, Orig. September 19.
- 2017 Albin Family Revocable Living Trust, et al. vs. Halliburton Energy Services, Inc. U.S. District Court for the Western District of Oklahoma. Case No. CIV-16-910-M. July 25.
- 2015 In the Matter of the Application by the City of Gallup for Permit to Appropriate Ground Water within the Gallup Underground Water Basin of New Mexico. Before the New Mexico State Engineer. Hearing No. 99-003. March 11.

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Groundwater Hydrologist

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- 2015 Mitchell McCormick, et al. vs. Halliburton Company, et al. U.S. District Court for the Western District of Oklahoma. Case No. 11-CV-01272-M. January 15.
- 2014 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. January 30. (*Arbitration*)
- 2013 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. August 5. (*Arbitration*)
- 2013 Mitchell McCormick, et al. vs. Halliburton Company, et al. U.S. District Court for the Western District of Oklahoma. July 30.
- 2013 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. July 24. (*Arbitration*)
- 2013 State of Montana vs. State of Wyoming and State of North Dakota. Supreme Court of the United States. No. 137, Original. July 16.
- 2013 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. June 11.
- 2013 State of New Mexico ex rel. State Engineer vs Kerr-McGee Corporation et al., State of New Mexico, County of Cibola, Thirteenth Judicial District Court, No. CB-83-190-CV & CB-83-220-CV (Consolidated). April 9 - 11.
- 2013 State of Montana vs. State of Wyoming and State of North Dakota. Supreme Court of the United States. No. 137, Original. February 12.
- 2013 Orange County vs. Sabic Innovative Plastics US, LLC., et al. Superior Court of the State of California for the County of Orange. Case No. 30-2008-00078246-CU-TT-CXC. January 29.
- 2012 State of New Mexico ex rel. State Engineer vs Kerr-McGee Corporation et al., State of New Mexico, County of Cibola, Thirteenth Judicial District Court, No. CB-83-190-CV & CB-83-220-CV (Consolidated). October 10-12.
- 2012 Orange County Water District vs Northrop Corporation, et al., Superior Court of the State of California in and for the County of Orange, No. 04CC00715. July 11 and August 1.
- 2012 Atlantic Richfield vs State of California, et al., Superior Court of the State of California, County of Los Angeles, Central District. No. BC 380474. June 21-22.
- 2012 Michael O. Thomas and Patricia Thomas vs ConocoPhillips, Inc. et al., In the Circuit Court in and for Escambia County, Florida, Case No. 2008 CA 001381. June 12.
- 2012 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. April 9.
- 2012 Ron Block, et al. vs. Daniel and Mary Lou Helix, et al. Superior Court of California, County of Contra Costa. No. CIVMSC05-01725. March 27.
- 2012 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. February 15.
- 2011 OneBeacon America Insurance Company vs. Narragansett Electric Company. Volume I. Commonwealth of Massachusetts, Suffolk County Superior Court. 05-3086-BLS-I. November 15.
- 2010 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. June 29.
- 2010 OneBeacon America Insurance Company vs. Narragansett Electric Company. Volume I. Commonwealth of Massachusetts, Suffolk County Superior Court. 05-3086-BLS-I. March 3.
- 2009 Morrison Enterprises and the City of Hastings, Nebraska vs Dravo Corporation. U.S. District Court for the District of Nebraska. No. 4:08-CV-3142 (Confidential section). July 23.
- 2009 State of Oklahoma vs. Tyson Foods et al. U.S. District Court for the Northern District of Oklahoma. 05-cv-349-TCK-SAJ. April 10.
- 2009 Kansas vs. Nebraska and Colorado. U.S. Supreme Court. No. 126, Orig. February 24.
- 2009 Timm Adams et al. vs. United States of America et al. U.S. District Court for the District of Idaho. CIV 03-0049-E-BLW. January 16.
- 2008 Gloria Ned et al. vs. Union Pacific Railroad. 14th Judicial District Court, Parish of Calcasieu, State of Louisiana. 2003-001100 (Consolidated Cases). August 15.

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- 2008 Jeff Alban et al. vs. ExxonMobil Corporation et al. Circuit Court for Baltimore County. 03-C-06-010932. January 24.
- 2007 City of Neodesha, Kansas et al. vs. BP Corporation North America. District Court of Wilson County, Kansas. 2004-CV-19. July 24.
- 2006 Nikko Materials USA, Inc., dba Gould Electronics v. NavCom Defense Electronics Inc., Ernest Jarvis, and Hyrum Jarvis. United States District Court, Central District of California. CV05-4158-JFW (VBKx). September 25-26.
- 2005 Rodney Montello et al. vs. Alcoa Inc. et al. vs. Whittaker Corporation. United States District Court for the Southern District of Texas, Victoria Division. C.A. No. V-02-84. December 19.
- 2005 Goodrich Corporation vs. Commercial Union Insurance Company et al. In the Court of Common Pleas, Summit County, Ohio. Case No. CV 99 02 0410. September 20.
- 2005 Santa Fe Pacific Gold Corporation vs. United Nuclear Corporation vs. The Travelers Indemnity Company and Century Indemnity Company, Inc. Eleventh Judicial District Court, County of McKinley, State of New Mexico. Case No. CV-97-139II. September 8.
- 2005 Nathaniel Allen et al. vs. Aerojet-General Corporation et al. Superior Court of the State of California for the County of Sacramento. Case No. 98AS01025. August 29.
- 2005 Aerojet-General Corporation vs. Fidelity & Casualty Co. of New York et al., Aerojet-General Corporation vs. Commercial Union Insurance Company, as Successor-In-Interest to Employers' Surplus Lines Insurance Company, etc. et al. Superior Court of the State of California in and for the County of Sacramento. Case No. 527932. July 20.
- 2005 United States of America vs. Jay James Jackson et al. U.S. District Court for the District of Nebraska. Case No. 8:04CV64. June 9.
- 2005 Palmisano vs. Olin Corporation. U.S. District Court, Northern District of California, San Jose Division. Case No. 5:03-cv-01607-RMW. March 7.
- 2005 Cheryl Lanoux et al. vs. Crompton Manufacturing Company et al. 23rd Judicial District Court, Parish of Ascension, State of Louisiana. Suit No. 72,897, Division: "B". February 25.
- 2004 RHI Holdings, Inc. vs. American Employers Insurance Company. Commonwealth of Massachusetts Superior Court Department. Civil Action No. 01-5443-G. December 7.
- 2004 Massachusetts Electric Company et al. vs. Travelers Casualty & Surety Company et al. Commonwealth of Massachusetts Superior Court. Civil Action No. 99-00467B. November 18-19.
- 2004 PECO Energy Company vs. Insurance Company of North America, et al. Court of Common Pleas of Chester County, Pennsylvania. Case No. 99-07386. June 14-15.
- 2004 Kerr-McGee Corporation and Kerr-McGee Chemical, LLC, vs. Hartford Accident and Indemnity Company and Liberty Mutual Insurance Company. Superior Court of New Jersey Law Division: Somerset County. Docket No.: SOM-L-229-01. May 26.
- 2003 American States Water Company et al. vs. State of California et al. Superior Court of the State of California in and for the County of Sacramento. No. 98AS01998. August 14 – 15.
- 2003 Waste Management, Inc. et al. vs. The Admiral Insurance Company et al. Superior Court of New Jersey Law Division: Hudson County. Case No. HUD-L-931-92. May 15.
- 2003 Waste Management, Inc. et al. vs. The Admiral Insurance Company et al. Superior Court of New Jersey Law Division: Hudson County. Case No. HUD-L-931-92. May 6.
- 2003 Landowners, LTD. vs. Litton Industries, Black Copy, Robert Silver, dba Vito's Autobody, West Coast Corporation, doing business as Peabody's Custom Paint and Autobody Specialist, David Mangola, Robert Mangola, David Silver and DOES 1-50, Inclusive. Superior Court of the State of California in and for the County of Los Angeles. Case No.: BC255187. March 25.

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- 2003 Bernice Samples et al. vs. Conoco, Inc.; Agrico Chemical Company, Inc; and Escambia Treating Company, Inc. Circuit Court of the First Judicial Circuit in and for Escambia County, Florida. Case No. 01-631-CA-01. March 20.
- 2002 State of Kansas vs. State of Colorado and United States of America. Supreme Court of the United States. Case No. 105 Original. December.
- 2002 PECO Energy Co. vs. Insurance Company of North America et al. Court of Common Plea Chester County, Pennsylvania. No. 99-07386. September 26 and 27.
- 2002 Associated Indemnity Corporation, and The American Insurance Company, vs. The Dow Chemical Company. U.S. District Court for the Eastern District of Michigan, Northern Division. No. 99 CV 76397. June 11 and 12.
- 2002 Bernice Samples et al. vs. Conoco, Inc.; Agrico Chemical Company, Inc; and Escambia Treating Company, Inc. Circuit Court for the First Judicial Court in and for Escambia County. Case No. 01-631-CA-01. June 7.
- 2002 State of New Mexico et al. vs. General Electric Company et al. The U.S. District Court for the District of New Mexico. Case No. CV 99-1254 BSJ/DJS and CV 99-1118 BSJ/LFG. April.
- 2002 Redlands Tort Litigation. Superior Court of the State of California for the County of San Bernardino. No. RCV 31496. February.
- 2001 State of Kansas vs. State of Colorado and United States of America. Supreme Court of the United States. Case No. 105 Original. August 2 and 3.
- 2001 Pfizer Inc. vs. Employers Insurance of Wausau. Superior Court of New Jersey Chancery Division: Middlesex County. Docket No. MID-C-108-92. July.
- 2001 Unisys Corporation et al. vs. Insurance Company of North America. New Jersey Superior Court, Law Division. Case No. L-1434-94-S. April.
- 2001 Gwendolyn Guillory et al. vs. Union Pacific Corporation et al. 14th Judicial District Court, Parish of Calcasieu, State of Louisiana. Case No. 98-5405. January 18.
- 2000 Chevy Chase Bank FSB vs. Shell Oil Company and Motiva Enterprises, LLC. U.S. District Court for the District of Maryland, Southern Division. Case No. PJM 00-CV-1557. November 22.
- 2000 American Home Products et al. vs. Adriatic Insurance Company et al. Superior Court of New Jersey Law Division: Hudson County. Docket No. HUD-L-5002-92. October.
- 2000 Sherwin-Williams vs. Artra, et al. U.S. District Court for the District of Maryland. Case No. S-91-2744. September.
- 2000 Long Island Lighting Company vs. Allianz Underwriters Insurance Company et al. Supreme Court of the State of New York, County of New York. Index No. 97-604715. August and September.
- 2000 Texaco, Inc. vs. H.T. Olinde, et al. U.S. Bankruptcy Court, Southern District of New York. Case Nos. 87 B 20142 (ASH), 87 B 20143 (ASH), and 87 B 20144 (ASH). August.
- 2000 United States of America, People of California vs. J.B. Stringfellow, Jr. et al. U.S. District Court for the Central District of California. Case No. CV 83-2501 R. March 20.
- 2000 Maurice L. McIntire et al. vs. Motorola, Inc. District of Arizona. Case No. CIV 91-2067 PHX PGR. February 14, 15, and 16.
- 2000 Warner-Lambert and Parke-Davis Company vs. Admiral Insurance et al. Superior Court of New Jersey Law Division: Middlesex County. Docket No. L-10456-94.
- 1999 Consolidated Edison Company of New York, Inc. vs. Allstate Insurance Company et al. Superior Court of the State of New York. Case No. 98/600142. November 4.
- 1999 Merck & Co., Inc. vs. Federal Insurance Company et al. Superior Court of New Jersey Chancery Division: Middlesex County. Docket No. CM-340-96. November.

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