No. 105, Original

In The Supreme Court of the United States

STATE OF KANSAS,

Plaintiff,

v.

STATE OF COLORADO,

Defendant,

and

UNITED STATES OF AMERICA,

Defendant-Intervenor.

On Exceptions To The Fourth Report Of The Special Master

REPLY BRIEF OF COLORADO OPPOSING THE EXCEPTIONS OF KANSAS

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REPLY BRIEF OF COLORADO OPPOSING THE EXCEPTIONS OF KANSAS

INTRODUCTION

This original action is before the Court for the fourth time on Kansas' exceptions to the Special Master's Fourth Report. In its June 11, 2001 opinion, this Court denied all exceptions to the Special Master's Third Report, except for granting Colorado's request to deny prejudgment interest between 1969 and 1985, and remanded the case to the Special Master "for preparation of a final judgment consistent with this opinion." *Kansas v. Colorado,* 533 U.S. 1, 20 (2001).

The Fourth Report addresses the issues that remained after the Court's June 11, 2001 opinion and contains thirteen recommendations. The last recommendation is that the case be remanded for preparation of a final decree in accord with the prior opinions of the Court in this case and the recommendations in the Report, or as the Court may otherwise determine. Fourth Report 139-40, ¶13. During the most recent trial segment, which lasted for 56 trial days, the Special Master heard the testimony of 40 witnesses and received 279 exhibits. *Id.* at 1. Many of the witnesses were called by Colorado to describe the replacement plans and sources of replacement water that were used by well associations in Colorado to replace well pumping depletions to the Arkansas River in accordance with rules and regulations adopted by the Colorado State Engineer that became fully effective in 1997. *Id.* at 8-24. The 140-page Fourth Report addresses the issues raised during the trial segment as well as calculating damages and prejudgment interest in accordance with the Court's June 11, 2001 opinion. *Id.* at 1-2. In a separate order, the

Special Master resolved a disagreement between the States on the calculation of prejudgment interest. *Id.* at 2.

Although Colorado does not fully agree with every recommendation made by the Special Master in his Fourth Report, Colorado did not file exceptions to the Report and supports the Special Master's recommendations as a fair and reasonable approach to bring an end to this case. Special Master Arthur L. Littleworth has served as Special Master in this case since 1987 and has heard all of the evidence in this case. With the sole exception of granting Colorado's request to change the date for the commencement of prejudgment interest, the Court has denied all exceptions to the Special Master's previous reports, which is a reflection of the careful and thoughtful consideration the Special Master has given to the issues during this long and complex case.

As the Special Master recognized, the appointment of a river master with sufficiently broad authority to resolve the kinds of modeling issues that may still arise in the future would facilitate continuing this litigation. Fourth Report 136. Colorado agrees with the Special Master that movement in the opposite direction is needed, *id.*, and Colorado proposed binding arbitration as an alternative to litigation of future modeling disputes. *Id.* at 135. Kansas rejected binding arbitration as a "surrender of an important constitutional right" under Article III, Section 2, of the U.S. Constitution, *id*., but other methods suggested by the Special Master may bear fruit once Kansas' exceptions have been resolved. *See id.* at 136.

Kansas has raised six exceptions to the Special Master's Fourth Report, which are addressed in this reply brief.

SUMMARY OF ARGUMENT

1. **River Master**. The Special Master recommended that the Court deny Kansas' request for the appointment of a river master because none of the interstate water cases supported the appointment of a river master with authority to decide the kinds of issues that may still arise with respect to continued compliance with the Arkansas River Compact. He concluded that the river master appointed in *Texas v. New Mexico*, 482 U.S. 124 (1987), does not adjudicate the kinds of disputes that may be involved in future application of the H-I model. He also noted that the duties of the river master appointed in *New Jersey v. New York*, 347 U.S. 995 (1954), are limited to making flow calculations and monitoring reservoir releases in order to maintain the applicable minimum rate of flow downstream. Further, the Special Master concluded that appointment of a river master with sufficiently broad authority to resolve modeling issues would make it easier to continue this litigation and that movement in the opposite direction is needed. The Special Master's recommendation that the Court deny Kansas' request for the appointment of a river master is consistent with the Court's precedents and fully supported by the reasons set forth in the Fourth Report.

2. **Prejudgment Interest**. The Special Master correctly interpreted the Court's intent in its June 11, 2001 opinion granting Colorado's request to change the date for awarding prejudgment interest from 1969 to 1985. Kansas' argument that it should be entitled to the investment income that it could have earned if the 1950-84 damages had been paid in 1985 is based on a rigid theory of compensation for money withheld that the Court rejected in its June 11, 2001 opinion. Kansas' argument is

also inconsistent with the Court's statement that the Special Master had acted properly in carefully analyzing the facts of the case and in only awarding as much pre-judgment interest as was required by a balancing of the equities.

3. **Period to Determine Compact Compliance**. The Special Master's acceptance of Colorado's proposal to use the results of the H-I model over a 10-year period to measure Compact compliance is fully supported by his findings that the H-I model is not sufficiently reliable on a short-term basis to determine compliance as recommended by Kansas and that Colorado's proposal provides a reasonable way to check on the effectiveness of Colorado's Use Rules to prevent material depletions to usable Stateline flows. Moreover, the Special Master's findings on the reliability of the H-I model are consistent with his previous conclusions about the H-I model during the liability phase, which this Court approved in its 1995 opinion.

4. **Deference to Colorado Water Courts**. The Special Master concluded that it is unnecessary, at this time, to decide the final amount of replacement plan credits for the Lower Arkansas Water Management Association's 1997-99 replacement plans, based on his finding that Colorado was in compliance with the Arkansas River Compact for the 1997-99 period without relying on the full amount of those credits and on his recommendation that future Compact compliance be determined over a longer period of time sufficient for the Colorado water court to act. His recommendation that the Court should defer to the Colorado water court to determine the terms and conditions on the changes of water rights to replacement use, including the amounts of replacement credits, is consistent with Article VI-A(2) of the Arkansas River Compact and the

wise use of this Court's time and resources. The Special Master recognized that the determinations by the Colorado water court would not preclude Kansas from seeking review under the Court's original jurisdiction, but the Colorado water court's determinations could make such review unnecessary.

5. **1997-99 Compliance**. The Special Master's recommendation that the Court approve his findings that implementation of Colorado's Use Rules, and the replacement water provided thereunder, brought Colorado into compliance with the Compact for the 1997-99 period is fully supported by the Special Master's finding that the H-I model is not accurate or reliable on an annual basis.

6. **Unresolved Issues**. The Special Master properly concluded that it was unnecessary at this time to resolve the fifteen disputed issues listed by Kansas, which include disputed H-I model calibration issues, 1997-99 accounting issues, and future compliance issues. The Special Master found that Colorado was not in violation of the Arkansas River Compact for the 1997-99 period, that future compliance will be determined over a longer period of time sufficient for the Colorado water court to act, and that additional evidence will be available that might make it unnecessary to resolve these issues in the future.

ARGUMENT

I. THE SPECIAL MASTER'S RECOMMENDATION THAT THE COURT DENY KANSAS' REQUEST FOR THE APPOINTMENT OF A RIVER MASTER IS CONSISTENT WITH THE COURT'S PRECEDENTS AND IS FULLY JUSTIFIED BY THE REASONS SET FORTH IN THE FOURTH REPORT.

Kansas states that the H-I model has become a necessary element of the enforcement of the Arkansas River Compact with regard to post-Compact pumping in Colorado. Kan. Br. 10. Based on the precedent of *Texas v. New Mexico*, 482 U.S. 124, 134 (1987), Kansas requested that a river master be appointed to administer the decree in this case. Kan. Br. 10. The Special Master concluded that the river master appointed in *Texas v. New Mexico* does not adjudicate the kinds of disputes that may be involved in future application of the H-I model, Fourth Report 128, and that none of the interstate water cases supported the appointment of a river master with authority to decide the kinds of issues that may still arise with respect to continued compliance with the Arkansas River Compact. *Id.* at 135-36. Further, the Special Master concluded that appointment of a river master with sufficiently broad authority to resolve future modeling issues would make it easier to continue the litigation and that movement in the opposite direction was needed. *Id.* at 136. The Special Master therefore recommended that the Court deny Kansas' request to appoint a river master and recommended instead that the Court retain jurisdiction for a limited period of time. *Id.* at 139, ¶12.

Kansas takes exception to the Special Master's recommendation that the Court deny its request to appoint a

river master. In support of its exception, Kansas argues that a river master is necessary to implement a decree of the Court in this case because the H-I model requires annual updating and may need to be modified. Kan. Br. 12. Kansas also argues that a procedure is needed to resolve ongoing disagreements over use of the H-I model, that this Court is the only court with the requisite jurisdiction to resolve such disputes, and that a series of original actions to resolve these issues can be anticipated, placing an unnecessary burden on the Court and on the States unless a river master is appointed. *Id.* at 13. The Special Master considered these arguments, but rejected Kansas' request, in part because the river master appointed in *Texas v. New Mexico* "does not adjudicate the kinds of disputes that may be involved in future application of the H-I model." Fourth Report 128.

Kansas argues, however, that the river master appointed in *Texas v. New Mexico* (the "Pecos River Master") is required to use "a fair degree of judgment in quantifying tributary flood waters, salvaged water and unappropriated flood waters, all of which are components of the calculation of New Mexico's obligations to deliver water at the stateline," and states that the Pecos River Master "even has the authority to modify the Pecos River Master's Manual itself, subject to review on clearly erroneous grounds by the Court." Kan. Br. 17. Kansas contends that this gives the Pecos River Master "the authority, on the motion of one or both of the States and subject to review, to modify the quantitative standard for delivery of water at the stateline on the Pecos River," and that this "is the same function as performed by the H-I Model in this case." *Id* at 18. (internal quotation marks omitted).

The Special Master concluded, however, that there was a significant difference between the duties performed by the Pecos River Master and the duties that a river master would have to perform in this case. In *Texas v. New Mexico*, disputes over the accuracy of the inflow-outflow methodology prescribed in the Pecos River Compact were settled when the Special Master in that case recommended a new curve and table that established the relationship between the inflow of the Pecos River in New Mexico and the required outflow at the stateline. Fourth Report 126; *see* Kan. Br. App. A-22 (setting forth the inflow-outflow equation). A successor Special Master then recommended that the Court enjoin the Pecos River Commission, or appoint a river master, "to make the calculations provided for in this Decree." Fourth Report 126-27. The Court chose to appoint a river master "to make the required periodic calculations." *Texas v. New Mexico*, 482 U.S. at 134. The Pecos River Master was also given authority to decide on proposed but contested changes to the Pecos River Master's Manual, which specifies factors that may need to be employed to adjust the computed departures in the Compact compliance calculations and the procedures to compute such departures. Kan. Br. App. A-23, A-93 to 94. But the Pecos River Master does not have the authority to adopt a methodology different from the inflow-outflow method, because that is the method specified in the Pecos River Compact. *Texas v. New Mexico*, 462 U.S. 554, 572-74 (1983). Only the Pecos River Commission may adopt a different method. *Id.*

In this case, the Arkansas River Compact does not specify a method for determining whether post-Compact development in Colorado has materially depleted usable Stateline flows in violation of the Compact. The H-I model

is simply a tool developed by Kansas to determine the impacts of post-Compact pumping in Colorado on Stateline flows. Fourth Report 121; *see Kansas v. Colorado*, 514 U.S. at 685, 686 (1995) (the Kansas hydrologic model was developed to estimate total depletions to establish that development in Colorado had resulted in depletions of usable river flow.) The H-I model has been revised several times during the course of this litigation, and, as the Special Master notes, the changes called for in his Fourth Report will require new calibration efforts. *Id.* at 123-24. As he further points out, "all experts agree that continued improvements need to be made to the model to increase its reliability." *Id.* at 123. Thus, this is not a case where the Court could appoint a river master to make required calculations pursuant to a methodology specified in the Compact or a formula decreed during the litigation. *See id*. at 124 ("Nor is the Court in a position to direct technically how the model should be calibrated in future updates.") Nor could a river master simply operate the model if the experts for the States failed to agree on changes. *Id.* at 128 (describing the complexity of the model and the lack of documentation on the assumptions used in the model and how it operates). Moreover, major disputes over the future use of the model are not likely to involve issues of basic data collection that a river master could determine if the states disagreed. *Id*. Thus, the Special Master correctly concluded that the appointment of a river master in *Texas v. New Mexico* to make periodic calculations did not support the appointment of a river master to decide the different and more complex kinds of issues that may still

arise with respect to continued compliance with the Arkansas River Compact. *Id.* at 128, 135-36.[1]

Next, Kansas argues that precedents other than *Texas v. New Mexico* support the appointment of a river master in this case. Kan. Br. 20-21. Kansas appears to concede that the modeling and data analysis that would be required if a river master were appointed in this case would require more judgment than exercised by the river master appointed in *New Jersey v. New York*, 347 U.S. 995 (1954) (the "Delaware River Master"). *Id.* However, Kansas

[1] The Pecos River Master's function is largely ministerial, except when a contested change in the River Master's Manual is proposed; but, in that case, it was expected that the proposed changes would raise technical issues of hydrology and statistics, as to which the River Master would have expertise. As Special Master Charles J. Meyers stated in his 1987 report:

> *Unless and until a change is proposed in the [River Master's] Manual, the River Master's function is largely ministerial, although some judgment may be required from time to time in the selection of numerical values*. The need for sound judgment will arise when one party seeks to modify the Manual without the concurrence of the other party. The Amended Decree does not empower the River Master to initiate changes in the Manual. . . . [T]he River Master is . . . delegated the power to decide in the first instance the propriety of proposed but contested changes in the Manual. *For the most part, these proposed changes are likely to raise technical issues of hydrology or statistics, as to which the River Master will have expertise. Because of that expertise, the recommended standard of review is whether the River Master's findings or conclusions are clearly erroneous*.

Kan. Br. App. A-93 to A-94 (emphasis added) (1987 report of Special Master Charles J. Meyers, in *Texas v. New Mexico* recommending a proposed Amended Decree in *Texas v. New Mexico* providing for the appointment of a river master and setting forth the river master's duties).

argues that, even if true, that "is all the more reason to appoint a river master on the Arkansas and not leave implementation of the decree to a series of original actions." *Id.* at 21. What Kansas fails to appreciate is the fundamental difference between the limited judgment exercised by the Delaware River Master in performing his duties and the expansive functions that a river master would have to perform to resolve disputes over the H-I model in this case. Fourth Report 128, 130, 135-36. Special Master Littleworth noted that while the Delaware River Master may not be given strictly "ministerial" acts to perform, the duties are limited to making flow calculations and monitoring reservoir releases in order to maintain the applicable minimum rate of flow downstream, *id.* at 130, and concluded that the appointment of a river master with such limited duties did not support the appointment of a river master with much broader duties in this case. *Id.* at 135-36.

Next, Kansas argues that the only case cited by the Special Master in which a river master or some type of continuing enforcement authority has been denied is *Vermont v. New York*, 417 U.S. 270 (1974) (per curiam). Kan. Br. 22. Kansas argues that there are "decisive differences" between the *Vermont* case and this case and that the considerations that caused the Court to deny the appointment of a master in that case do not exist here. *Id.* at 22-23. Kansas relies on the Court's concern in *Vermont v. New York* that the appointment of a master pursuant to a stipulated decree might result in the master submitting "proposals having no relation to law" or no relation to the Court's performance of its Article III functions. 417 U.S. at 277. Kansas asserts that because this case does not present the same risk, *Vermont v. New York* is inapposite.

However, in the opinion, the Court also reviewed other cases in which the Court had denied requests to appoint a commissioner or a river master and said that *New Jersey v. New York* was a "rare case" where the Court had appointed a river master. *Id.* at 275. The *Vermont* Court also noted that the Delaware River Master was given only ministerial acts to perform, such as reading gauges and measuring flow, *id*., and said that in *New Jersey v. New York*, "[a]ll that remained was to supervise the application of the various formulas which the Court had decreed, based on findings of fact." 417 U.S. at 275-76.

Thus, *Vermont v. New York* supports Special Master Littleworth's conclusion that the exceptions where the Court has appointed a river master have been cases where a river master has clearly defined duties to perform to implement a decree, not cases where a river master would have to resolve the kinds of issues that may still arise in this case. Fourth Report 135-36. Moreover, while there may be future modeling disputes, the Special Master, who has served in this case for 17 years, considered whether the appointment of a river master would be likely to encourage negotiation to resolve such disputes or would simply make it easier to continue the litigation. *Id.* at 136. The Special Master's view on this point merits consideration by the Court, and his recommendation that the parties consider negotiation or arbitration to resolve future modeling disputes, *id.* at 135-36, is consistent with this Court's precedents. *E.g., Arizona v. California*, 373 U.S. 546, 564 (1963) (stating the Court's "often expressed preference that, where possible, States settle their controversies by mutual accommodation and agreement") (internal quotations omitted); *Colorado v. Kansas*, 320 U.S. 383, 392 (1943) ("Mutual accommodation and agreement

should, if possible, be the medium of settlement, instead of invocation of our adjudicatory power.")

The Court expressed similar concerns in an earlier decision in *Texas v. New Mexico*, 462 U.S. 554 (1983), when it rejected a recommendation that either the United States Commissioner or some other third party be given the tie-breaking vote on the Pecos River Commission. *Id.* at 564-65. The Court noted that it had "expressly refused to make indefinite appointments of quasi-administrative officials to control the division of interstate waters on a day-to-day basis, even with the consent of the States involved." *Id.* at 566 (citations omitted). Similarly, the Court stated: "Continuing supervision by this Court of water decrees would test the limits of proper judicial functions, and we have thought it wise not to undertake such a project." *Id*., citing *Vermont v. New York*, 417 U.S. at 277.[2]

Finally, Kansas argues that while settlements of other cases are to be commended, it cannot reasonably be presumed that disputes will abruptly stop after more than a century of intermittent but continual disputes between the two States. Kan. Br. 24-25. The disputes in the earlier half of the last century were over the equitable apportionment of

[2] While the Court ultimately appointed a river master in *Texas v. New Mexico*, 482 U.S. 124 (1987), the Court did not discount the factors stated in its 1983 opinion. In fact, it specifically stated that in the past, the Court has expressed a strong reluctance to appoint a river master. *Id.* at 134. The Court noted, however, that in exceptional circumstances, a river master may be necessary, and the Court deemed it appropriate in that situation. *Id.* However, by that point in the case, disputes over the accuracy of the inflow-outflow methodology prescribed in the Pecos River Compact had been settled and the River Master's function was largely ministerial.

the Arkansas River. *See Kansas v. Colorado*, 514 U.S. 673, 678 (1995) (describing the previous litigation). In 1943, the Court suggested that the States resolve their differences by negotiation and agreement, *Colorado v. Kansas*, 320 U.S. 383, 392 (1943), which they did in the Arkansas River Compact. *See Kansas v. Colorado*, 514 U.S. at 678. The Compact obviously did not eliminate all disputes, but the current lawsuit has been protracted primarily because of the difficulties in quantifying depletions to usable State-line flows from post-Compact well development. *See* Fourth Report at 109 ("Modeling the Arkansas River Basin in Colorado is extraordinarily difficult, and perhaps unprecedented."); *id.* at 110 (noting that Dr. R. Allen Freeze, one of the distinguished pioneers in computer modeling, had explained the difficulties of the task and "cautioned that large errors could be expected in this complex modeling process."). However, as the Special Master notes, the major issues in this case have been determined or will be determined as a result of the Fourth Report, *id*. at 136, although litigation to this point has not resolved every kind of modeling issue that may arise in the future. *Id.* at 121-23. In Colorado's view, the Special Master's recommendation offers a greater prospect that future modeling disputes will be resolved through negotiation and agreement. *See id*. at 136. Further, the States have an incentive to resolve future modeling disputes by negotiation and agreement because litigation to resolve modeling disputes would be very time-consuming and expensive, as this case has amply demonstrated.

Colorado acknowledges that the issue of how to reasonably assure that Colorado will continue to meet its compact obligations is not an easy one. However, the issue is not different in kind from other cases where a defendant

has been found to have violated a federal law or constitutional provision. In difficult cases involving constitutional violations, such as school desegregation cases, federal courts have retained jurisdiction for considerable periods to ensure compliance with equitable remedies. *Freeman v. Pitts*, 503 U.S. 467, 487-92 (1992). But even in those cases, a court's jurisdiction normally ends when it is shown that a defendant has attained the requisite degree of compliance. *Id.* Colorado recognizes that there are unresolved issues regarding the use of the H-I model, but limited arbitration is available under the provisions of the Arkansas River Compact. Arkansas River Compact, art. VIII-D. This would restore control of the administration of the Compact to the Arkansas River Compact Administration, a role it was intended to perform under the Compact. *Id.*, art. VIII-H; Fourth Report 136. As an alternative, Colorado has proposed binding arbitration as a means to resolve such issues. In either case, arbitration could incorporate the use of technical arbitrators or advisors.

While it is conceivable that a series of original actions may be necessary to resolve future modeling disputes, the appointment of a river master with authority to resolve such disputes would not eliminate the possibility of litigation. In fact, the Special Master concluded that it would make it easier to continue the litigation. Fourth Report 136. Nor is this a case where cooperation by the parties has been impossible because of the protracted litigation. Prior to the most recent trial segment, the Special Master noted that "[t]he relations between the States during the course of this trial have been generally marked by exemplary

cooperation. Agreements have been reached on some issues that otherwise would have been extremely expensive and time consuming to try." Fourth Report App. 33.[3] The Special Master has encouraged the States to work cooperatively to improve data inputs to the model. Fourth Report at 53. In addition, he recognized that as more data is developed in the Arkansas River Valley, adjustments to the new Kansas potential evapotranspiration values "in accordance with recognized professional procedures may be appropriate." *Id.* at 79. The Special Master also noted that the Arkansas River Compact Administration provides an avenue to resolve disputes. *Id.* at 136; *see also* Fourth Report App. 33. Absent an agreement for binding arbitration, this process provides a reasonable prospect for resolving future disputes without the need for recourse to this Court.

Colorado agrees with the Special Master that appointment of a river master would encourage rather than discourage continued litigation and that movement in the opposite direction is needed. Kansas has not shown that this case fits the rare circumstances where appointment of a river master would be appropriate. The Special Master's recommendation that the Court deny Kansas' request for

[3] On the other hand, the litigious attitude of Texas and New Mexico was clearly a factor that led to the appointment of a river master in *Texas v. New Mexico*. *See,* e.g., *Texas v. New Mexico*, 482 U.S. at 134 ("The natural propensity of these two States to disagree if an allocation formula leaves room to do so cannot be ignored."); Kan. Br. App. A-97 ("New Mexico realizes that this argument is a direct attack on the findings and conclusions recommended in my July 1986 Report and adopted by the Court in June 1987."); *id.* at A-98 ("I reject completely the notion that every year the River Master must determine the level of man's activities and their effect on the river's flow.")

the appointment of a river master is consistent with the Court's precedents and fully justified by the reasons set out in the Fourth Report.

II. THE SPECIAL MASTER'S ORDER CORRECTLY INTERPRETED THE COURT'S INTENT WHEN IT SUSTAINED COLORADO'S REQUEST TO CHANGE THE DATE FOR AWARDING PREJUDGMENT INTEREST.

The Special Master in his Order of December 2, 2002 (which is printed as Exhibit 2 in the Appendix to the Fourth Report) granted Colorado's motion to determine the amount of damages and prejudgment interest for the 1950-94 period as $28,998,336 in 2002 dollars. Fourth Report App. 8. Kansas excepts to this ruling. Based on its interpretation of the Court's June 11, 2001 opinion, Kansas contends that the amount should be $52,879,927. *Id*.

The Special Master concluded that Kansas' theory for calculating prejudgment interest was inconsistent with the methodology used by the States to calculate the total amount of damages and prejudgment interest that he had directed following his Third Report. Fourth Report App. 12-13. That amount, which the States had conveyed to the Court in their briefs, totaled approximately $38 million. *Id.* The Special Master accordingly concluded that Kansas' theory was inconsistent with the clear intent of the Court to limit the application of prejudgment interest when it granted Colorado's request to change the date that prejudgment interest should begin to accrue from 1969 to 1985. *Id.* at 13-15. The Special Master correctly determined this issue.

In his Third Report, the Special Master concluded that there was no categorical bar to the award of prejudgment interest on an unliquidated claim of damages for violation of the Arkansas River Compact, but concluded that prejudgment interest "should not be awarded according to [any] rigid theory of compensation for money withheld, but rather should respond to 'considerations of fairness.'" *Kansas v. Colorado*, 533 U.S. 1, 13 (quoting Third Report 97) (internal quotation marks and citation omitted). For reasons stated in his Third Report, the Special Master concluded that prejudgment interest should be included in this case at the rates proposed by Kansas, but only from 1969 when Colorado knew or should have known that post-Compact well pumping was violating the Compact. Third Report 103, 107 (Sections XI.C, D, and E of the Third Report are reprinted in the Appendix to this brief). The Special Master further rejected Kansas' position that full interest rates should apply to the damages from 1950-68 when neither state saw any wrongdoing or thought that Compact violations were occurring. *Id.* at 106. The Special Master pointed out that only with hindsight and the benefit of sophisticated computer modeling could Stateline depletions be found to have occurred during those early years. *Id.* He also took into account the long delay in this case and the dramatic impact of compounding over so many years. *Id.* at 102-03. The Special Master recommended the inclusion of prejudgment interest, but only on the damages that had occurred from 1969 to the date of judgment. *Id.* at 107. He recommended that the damages for the period 1950-68 be adjusted for inflation (which Colorado had always proposed), "but should not bear compound interest reflecting the loss of use of those monies." *Id.* This Court agreed that "the Special Master [had] acted properly in carefully analyzing the

facts of the case and in only awarding as much prejudgment interest as was required by a balancing of the equities." 533 U.S. at 14.

Kansas now argues that the Court, in granting Colorado's request to deny the award of prejudgment interest on damages for the period between 1968 and 1985, intended to overrule the Special Master's recommendation that the damages prior to that period should be adjusted only for inflation. Kan. Br. 31-32. Kansas recognizes that the issue is a matter of what the Court intended in its June 2001 opinion, *id*. at 27-28, but nevertheless argues that prejudgment interest should be awarded on all damages beginning in 1985 based on a rigid theory of compensation for money withheld. *Id.* at 28-29, 31. In terms of consequences, this is no small matter. The difference in 2002 dollars is $24 million. Fourth Report App. 11. Moreover, under Kansas' current theory, Colorado would have been better off if the Court had rejected all of its exceptions to the Third Report, rather than partially granting its request to change the date for the commencement of prejudgment interest. *Id.* at 14. Not surprisingly, Colorado disagrees with Kansas' argument, as did the Special Master. *Id.* at 15.

In its exceptions to the Third Report, Kansas argued that the accrual of prejudgment interest should begin in 1950. 533 U.S. at 12. Colorado did not take an exception to the Special Master's recommendation that the damages from 1950-68 should be adjusted for inflation only to the date of judgment, but did request that if prejudgment interest was to be awarded as recommended by the Special Master, the date for awarding prejudgment interest should be moved back from 1969 to 1985. *Id.* at 15. The Special Master's reasons for not awarding prejudgment interest on

damages occurring from 1950-68 until the date of judgment included the fact that in the early years after the Compact was signed, neither State had seen any wrongdoing or thought Kansas was not receiving its compact share of usable flows of the Arkansas River. Third Report 106. In addition, he noted that ordinarily when prejudgment interest is denied, only "nominal" damages (i.e., damages unadjusted for inflation) would be recovered, but here Colorado had proposed that a fair and equitable remedy would adjust all damages for inflation. *Id.* at 107. The Court agreed that "the Special Master acted properly in carefully analyzing the facts of the case and in only awarding as much prejudgment interest as was required by a balancing of the equities." 533 U.S. at 14. If Kansas' interpretation of the Court's opinion were correct, this statement would not be accurate, because the Special Master would not have awarded as much prejudgment interest as was required by a balancing of the equities.

Moreover, in granting Colorado's request to change the date for the award of prejudgment interest, the Court noted:

> Once it became obvious that a violation of the Compact had occurred, it was equally clear that the proceedings necessary to evaluate the significance of the violations would be complex and protracted. Despite the diligence of the parties and the Special Master, over 15 years have elapsed since the complaint was filed.

533 U.S. at 16. Thus, not only were the facts before the complaint was filed relevant to the equitable considerations, but the Court expressly stated that the complex and protracted nature of the proceedings necessary to evaluate

Kansas' claim after the complaint was filed was also a consideration.

Kansas nevertheless argues that the change of the date by this Court reflected a "fundamental shift" between the rationale relied upon by the Special Master and the rationale on which the Court settled in determining that interest should begin to accrue in 1985. Kan. Br. 32. Kansas argues that the basis for the Court's ruling was that Colorado "indisputably was on notice of Kansas' claims once it was served with Kansas' complaint." *Id.* Kansas argues that it will be denied the investment income it could have earned after 1985 on damages for the years 1950-84 if those damages are adjusted for inflation only and that Kansas should be entitled to the investment income because, if Colorado had promptly paid the judgment, Kansas could have invested the money itself. *Id.* at 31 ("Since 1985 . . . it has been uniquely in Colorado's power to protect against the running of interest, whether by tendering a sum of damages to Kansas or by placing the sum in an interest-bearing trust fund."); *id*. at 34 ("Were it possible to avoid litigation delay, a judgment could have been entered for Kansas in 1985 for the damages incurred as of that time, adjusted for inflation only.")

As a preliminary matter, Kansas' argument omits the fact that Kansas did not request damages in its original complaint and did not amend its complaint to request damages until May 1989. First Report 18-19. More importantly, even in 1985 when Kansas filed its motion for leave to file the complaint, it was clear, as the Court said, that the proceedings necessary to evaluate the significance of the violations would be complex and protracted. 533 U.S. at 16. In 1985, Colorado had no idea of the amount of the depletions that had occurred or the amount of damages

that might be awarded. The development of a model to quantify depletions was still several years in the future, and the Kansas H-I model had to be substantially revised during the liability phase before it produced reliable results. First Report 230-40, 245-47 (describing the development of the H-I model and the problems encountered).[4] The Kansas experts then had to revise the model for the 1986-94 update to correct errors. Second Report 21-22. They also made additional changes during the most recent trial segment. Fourth Report 50-53, 54-55, 81-83. And, even today, all experts agree that continued improvements need to be made to the model to increase its reliability. *Id.* at 123. Thus, adjusting the damages for the violations that occurred prior to 1985 for inflation only is fair and equitable because there was nothing that Colorado could do in 1985 to stop the past violations that had occurred when no one had any thought that violations had occurred or when the nature and extent of Colorado's violations were unclear. And, even after Kansas filed its motion for leave to file the complaint, the proceedings necessary to quantify the amount of the depletions were necessarily complex and protracted.

[4] In his First Report, the Special Master stated: "The major changes in Kansas' position and evidence cannot be ignored. For some five years the Kansas experts worked to accumulate the necessary data and to develop the H-I model in order to support the State's claims. Yet after Colorado's cross-examination during trial uncovered numerous errors and shortcomings in the Kansas evidence, and after the trial recess caused by Durbin's hospitalization, Kansas' replacement experts testified to substantially different conclusions than those resulting from the original H-I model." First Report 236-37 (footnote omitted.)

Colorado has always proposed that a fair and equitable remedy would adjust the damages for inflation, thereby ensuring that, at the date of judgment, the dollar value of the damages for the 1950-84 period will be equal to the value of the damages when they occurred. What Kansas argues is that it should also be entitled to the *investment* income that it could have earned if the 1950-84 damages had been paid in 1985. The Special Master concluded that it would not be fair and equitable to award compound interest on the damages that occurred prior to 1969, Third Report at 106-07, and that the Court had not intended to alter his recommendation when it granted Colorado's request to deny prejudgment interest during the period between 1968 and 1985. Fourth Report App. 14-15. The Court's statement that "the Special Master acted properly in carefully analyzing the facts of the case and in only awarding as much prejudgment interest as was required by a balancing of the equities," 514 U.S. at 14, fully supports the Special Master's interpretation of the Court's intent.

III. THE SPECIAL MASTER'S ACCEPTANCE OF COLORADO'S PROPOSAL TO USE THE RESULTS OF THE H-I MODEL OVER A 10-YEAR PERIOD TO MEASURE COMPACT COMPLIANCE IS FULLY SUPPORTED BY THE FINDINGS AND CONCLUSIONS IN THE FOURTH REPORT.

The Special Master concluded that use of the H-I model over a ten-year period, as proposed by Colorado, is necessary to achieve reasonably accurate model results and that Colorado's proposal provided a reasonable way to check the effectiveness of the rules and regulations

adopted by the Colorado State Engineer (Colorado's Use Rules) to prevent material depletions of usable Stateline flows. Fourth Report at 120. Kansas takes exception to the Special Master's recommendation on the basis that "the Compact contemplates an accounting period no longer that one year." Kan. Br. 36.

The Special Master accepted Colorado's proposal based on his finding that "the H-I model is not sufficiently reliable on a short term basis to determine compliance as recommended by Kansas." Fourth Report at 109. The Special Master reviewed the Kansas statistical evidence and the testimony of Kansas' chief modeling expert, Mr. Steven P. Larson, *id*. at 110-112, and concluded that the statistical evidence "does not convincingly support the accuracy of the H-I model on an annual or a short-term basis." *Id.* at 110. He also reviewed the testimony of Dr. Charles M. Brendecke,[5] an expert who testified for Colorado on the issue of model reliability. *Id.* at 113. Dr. Brendecke presented an error analysis of the H-I model results, using commonly used statistical concepts, *id.* at 113-15, and it was his overall conclusion that the H-I model, as it now operates, should not be used on a short-term basis, but could be used over a longer period of time, perhaps 10 to 15 years, to determine compliance. *Id.* at 115.

[5] Dr. Brendecke holds a Ph.D. in civil engineering from Stanford University. Fourth Report 113. He was an expert witness for Wyoming in the recent case of *Nebraska v. Wyoming* and served as a consultant on technical issues to the Special Master in *Texas v. New Mexico*. *Id.* He has extensive modeling experience in other river basins. *Id.* His qualifications are found in Colorado Exhibit 1440.

In addition to Dr. Brendecke's testimony, the Special Master noted that there are "innumerable exhibits which plainly show that in any given month or year the model predictions of diversion or river flows differ substantially from actual measured data." *Id.* at 115. Based on his review of the evidence, the Special Master concluded:

> Only by using longer term averages do the model simulations more closely match historic data. I find that the H-I model is not sufficiently accurate on a short-term basis to be used to determine compact compliance on a monthly or annual basis.

Id.

The Special Master then reviewed Colorado's compact compliance proposal, which relies on Colorado's Use Rules to require replacement water based on presumptive depletion factors, with the H-I model being used to determine Compact compliance over a 10-year period. *Id.* at 116-20. The Special Master concluded that the use of the H-I model over a 10-year period, as proposed by Colorado, is necessary to achieve reasonably accurate model results and that Colorado's proposal provided a reasonable way to check upon the effectiveness of Colorado's Use Rules to prevent material depletions of usable Stateline flows. *Id.* at 120; *see id.* at 139, ¶ 11 (recommendation that the Court approve his conclusions accepting Colorado's proposal).

Kansas argues, however, that a compliance period of one year or less is a critical element of its compact entitlement. Kan. Br. 37-40. This overlooks the fact that the model developed by Kansas to determine if there are depletions to usable Stateline flows is not sufficiently accurate or reliable on a short-term basis to determine

whether there have been depletions or accretions (i.e., increases) to usable Stateline flows in any particular month or year. *See Kansas v. Colorado*, 514 U.S. at 686 (the Special Master properly rejected the Spronk usable flow analysis because it required the H-I model to do something it was not designed to do, i.e., predict depletions accurately on a monthly basis.) Colorado's proposal requires that replacement water be provided on an ongoing basis. Fourth Report 19-20. The flaw in Kansas' argument is that no one can determine, using the H-I model, whether those replacements are or are not adequate to prevent such depletions on an annual basis. *See Kansas v. Colorado*, 514 U.S. at 684 (depletions shown by the Kansas model were well within the model's range of error; as a result, "[o]ne [could not] be sure whether impact or error [was] being shown." (citation omitted)); *id*. at 686 ("But, as Durbin, Kansas' first expert, testified, Kansas' hydrological model was only a 'good predictor' when 'looking at long periods of time.'" (internal quotation marks and citation omitted)).

Kansas argues, however, that the existence of uncertainty with regard to the inflow-outflow methodology in *Texas v. New Mexico* did not prevent the Court from ordering "a very specific standard to determine compact compliance on the Pecos River." Kan. Br. 40. This argument misunderstands the source of the inflow-outflow methodology that is used to determine compact compliance on the Pecos River. Article IV of the Pecos River Compact provides as follows:

> (c) Unless and until a more feasible method is devised and adopted by the Commission the inflow-outflow method, as described in the Report

> of the Engineering Advisory Committee, shall be used to:
>
> (i) Determine the effect on the state-line flow of any change in depletions by man's activities or otherwise, of the waters of the Pecos River in New Mexico.

Pecos River Compact, art IV(c)(i), quoted in *Texas v. New Mexico*, 462 U.S. at 571-72. It was determined in *Texas v. New Mexico* that the curve provided by the original Inflow-Outflow Manual did not accurately describe the correlation between inflows and the state-line outflow under the 1947 condition established by the Compact. 462 U.S. at 573. The Court rejected a proposal by Texas to simplify the process of drawing a new curve by reducing the index flows to a single directly measurable value because it was not consistent with the intent of the Compact's framers. *Id.* at 574. The Court held that the Pecos River Commission was free to adopt such an approach under the Compact, but the Court could not apply such an approach against New Mexico in the absence of Commission action. *Id.* Instead, the litigation resulted in drawing a new curve, like the old one but using more accurate data. Thus, the use of the inflow-outflow method was what Texas and New Mexico had agreed to in the Pecos River Compact to determine the effects on stateline flows of any change in depletions by man's activities. *Id.* at 572. The existence of uncertainty with regard to the inflow-outflow methodology was not relevant because the States had agreed in the Compact that the inflow-outflow method would be used unless and until the Commission adopted a more feasible approach. *See id.* at 564 ("[U]nless the compact to which Congress has consented is somehow unconstitutional, no

court may order relief inconsistent with its express terms.")

In this case, the Arkansas River Compact does not specify that the H-I model, or any other method, shall be used to determine whether a future development causes depletions to usable Stateline flows. *See* First Report 106 n. 41 (noting that "[t]he Arkansas River Compact contrasts sharply with the Pecos River Compact adopted by New Mexico and Texas about the same time, namely 1948.") Rather, Article IV-D of the Compact provides that it is not intended to impede or prevent future beneficial development, "Provided, that the waters of the Arkansas River, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this Compact by such future development or construction." Arkansas River Compact, art. IV-D, quoted in *Kansas v. Colorado*, 533 U.S. at 5.

The H-I model was developed by Kansas to quantify depletions to usable Stateline flows from post-Compact well pumping, *see Kansas v. Colorado*, 514 U.S. at 685, 686, but the Special Master has determined that it is not accurate or reliable to determine Compact compliance on a short-term basis, and Kansas does not dispute that finding. Moreover, this finding is consistent with the Special Master's previous rulings on the model's reliability, which were approved by this Court in its 1995 opinion. *Id.* at 684, 686-87.

Further, Colorado's proposal was not to ignore the need for Compact compliance for 10 years, then run the model once every 10 years and replace any depletions in the following year. It was to make replacements on an ongoing basis based on the presumptive depletion factors

in Colorado's Use Rules, to run the model annually to keep track of the depletions and accretions predicted by the model, and to use the model results over a ten-year period, making up any net depletion in the eleventh year or carrying forward any net accretion into the eleventh year, with the process continuing on a moving ten-year basis. Fourth Report at 117. Therefore, even if the Compact contemplates an accounting period no longer than one year, Colorado's proposal provides for annual replacement, with periodic adjustments when warranted. *Id.* at 118. The H-I model is simply not sufficiently accurate to determine that Compact compliance is or is not being met on an annual or short-term basis.[6]

Kansas also argues that the annual depletions by Colorado beginning in 1950 were determined and used as the basis for the Special Master's determinations and have been utilized in the determination of damages. Kan. Br. 43-44. The States used the annual depletions for the purpose of calculating damages, but the Special Master never determined that the annual results of the model were accurate or reliable for the purpose of determining Compact compliance.

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[6] Thus, there is no need for the Court to determine whether the Compact contemplates an accounting period no longer than one year. Previously, the Special Master had noted that the Trinidad Project had been analyzed originally on the basis of net average impacts on inflow to John Martin Reservoir, without objection from Kansas. First Report 428. While the Special Master agreed with Kansas that the use of averages may sometimes be inappropriate, he did not resolve the issue because he concluded that Kansas had failed to prove its claim. *Id.* at 431. This Court agreed and overruled Kansas' exception to the Special Master's dismissal of its Trinidad Reservoir claim. *Kansas v. Colorado*, 514 U.S. at 683.

In his First Report, the Special Master was not able to determine the amount of the depletions to usable Stateline flows, First Report 263, but nonetheless rejected the Spronk Usable Flow method for use with the H-I model results because that method assumed that the model could accurately predict changes of Stateline flows on a monthly basis. *Id.* at 302-05. This Court agreed with the Special Master's rejection of the Spronk Usable Flow method on that basis. 514 U.S. at 686-87. On remand, Kansas and Colorado stipulated to the amount of depletions to usable Stateline flow caused by post-Compact well pumping in Colorado for the period 1950-85 using the H-I model. Second Report App. 36-39. Kansas then modified the model, and, in his Second Report, the Special Master determined that the depletions for the period 1986-94 were 91,565 acre-feet, Second Report 112, but made no finding that the annual depletions calculated with the model were accurate or reliable.

In his Third Report, the Special Master recommended that the depletions for the 1995-96 period be determined to be 7,935 acre-feet, bringing the total depletions for 1950-96 to 428,005 acre-feet, Third Report 119, but again made no finding that the annual depletions were accurate or reliable.[7] The Special Master now has specifically addressed the accuracy and reliability of the H-I model on an annual basis and has found that it is not accurate or reliable on an annual or a short-term basis. That conclusion is fully consistent with the Special Master's prior

[7] The States entered into a stipulation to determine the impacts in Kansas resulting from the annual depletions to usable Stateline flows to facilitate the determination of damages. Third Report 8-9, 46.

conclusions regarding the Winter Water Storage Program and the Spronk usable flow analysis, *Kansas v. Colorado*, 514 U.S. at 684, 685-87, and is amply supported by the findings in the Fourth Report. Moreover, Colorado's proposal for Compact compliance is consistent with the Compact, even if the Compact contemplates accounting on an annual basis.

IV. THE SPECIAL MASTER'S RECOMMENDATION REGARDING DETERMINATION OF THE AMOUNTS OF REPLACEMENT PLAN CREDITS IS CONSISTENT WITH THE ARKANSAS RIVER COMPACT AND THE COURT'S ROLE.

The Special Master recommends "[t]hat the final amounts of Replacement Plan credits to be applied toward Colorado's compact obligations shall be the amounts determined by the Colorado Water Court, and any appeals therefrom." Fourth Report 138, ¶9. Kansas takes exception to this recommendation, arguing that these issues are critical to Kansas' rights under the Compact and that the Special Master's recommendation "would assign the determination of issues critical to resolving a dispute between the States to a Colorado state court, in a proceeding to which Kansas is not even a party." Kan. Br. 45, 46. Kansas does not quote the Special Master's full recommendation, which makes it clear that he fully understood that "the Colorado Water Courts are [not] empowered to make a final determination on any matter essential to compact compliance at the Stateline, or that Colorado's reliance on such Water Court actions will necessarily satisfy its compact obligations." Fourth Report 138, ¶9. Rather, his recommendation was to defer to the Colorado

water court's determinations, in part to avoid the possibility of inconsistent judgments, because the Colorado water court would have to consider the effect of the changes of water rights on senior surface water rights in Colorado in any event. *Id.* at 94.

In Section VIII of his Report, the Special Master fully explained the reasons that it made sense, given Colorado's system of water courts, with specialized water judges, to defer to the proceedings before the Colorado water court. *Id.* at 93. In a pending change of water rights proceeding, the water judge will examine precisely the kinds of issues that Kansas has raised concerning the credits the Lower Arkansas Water Management Association (LAWMA)[8] should be allowed for certain water rights that it has acquired for replacement use. *Id.* at 93; *see Santa Fe Trail Ranches Property Owners Ass'n v. Simpson*, 990 P.2d 46, 52-54 (Colo. 1999) (describing Colorado's procedures to determine changes of water rights and applicable standards).

The Special Master concluded that deferring to the Colorado water courts to make such determinations in the first instance was consistent with Article VI-A (2) of the Arkansas River Compact, which provides: "Except as otherwise provided, nothing in this Compact shall be construed as supplanting the administration by Colorado of the rights of appropriators of waters of the Arkansas River in said State as decreed to said appropriators by the courts of Colorado, . . ." Fourth Report 93. The Special

[8] LAWMA is one of the well associations that prepares replacement plans for its members. *See* Fourth Report 13-14, 15 n. 2.

Master noted that Colorado has established a system of water courts, with specialized water judges, to examine precisely the kinds of issues involved in LAWMA's acquisition of water rights and that all such changes in water rights must be approved under Colorado law by the water court. *Id.; cf. Frontier Ditch Co. v. Southeastern Colo. Water Conservancy Dist.*, 761 P.2d 1117 (Colo. 1988) (affirming water judge's dismissal of an application for determination of a water right by a canal that diverts in Colorado for irrigation in Kansas because Kansas has exclusive jurisdiction over the canal and its headworks under Article VI-B of the Compact).

The Special Master therefore concluded that it was unnecessary, at this time, for this Court to determine the final amount of the credits that LAWMA should be allowed in its 1997-99 replacement plans. *Id.* at 94. He found that while Kansas is not a party to the water court proceedings, major Colorado canal companies were likely to protest or appear in the water court proceedings and that those canal companies have essentially the same interests as Kansas in preventing any expansion of use by LAWMA. *Id.* at 95. However, he noted, "None of these determinations . . . precludes Kansas from seeking review under the Court's original jurisdiction." *Id.* at 94; *see also id*. at 138-39 ("All replacement credits, no matter how determined, are subject to the right of Kansas to seek relief under the Court's original jurisdiction.").

Colorado agrees with the Special Master that it is consistent with Article VI-A(2) of the Compact and a wise use of this Court's time and resources to defer any determination of disputed replacement credits pending the outcome of the Colorado water court proceedings. *Cf. Colorado River Water Cons. Dist. v. United States*, 424

U.S. 800, 817, 819-20 (1976) (considerations of wise judicial administration and clear federal policy evinced by the McCarran Amendment supported dismissal of separate federal court actions to adjudicate water rights).[9] In most cases, the disputes relate to whether specific farm fields were historically irrigated by the water rights or shares in mutual ditch companies that LAWMA has acquired for replacement use and the amount of consumptive use credits for such water rights. Fourth Report 23, 92; *see also id.* at 10-17 (describing sources of replacement water and organizations that acquire replacement water). Kansas has also raised issues about the terms and conditions that should be imposed on the changes of such water rights and shares. *Id.* at 23. LAWMA has filed an application with the Colorado water court, which will have to address these issues to determine whether the changes will injure Colorado water rights. *Id.* at 93-94. Rather than resolve such issues, the Special Master recognized that the Colorado water court will have to determine these issues in any event and that this Court need not do so at this time. *Id.* at 93-94; 138-39, ¶9. The Special Master's recommendation is consistent with Article VI-A (2) of the

[9] The difference between *Colorado River* and this case is that the Court would not abstain from exercising jurisdiction here but simply postpone any action pending the outcome of the Colorado water court proceedings. *Cf. Illinois v. City of Milwaukee*, 406 U.S. 91, 93 (1972) ("It has long been this Court's philosophy that 'our original jurisdiction should be invoked sparingly.' *Utah v. United States*, 394 U.S. 89 [(1969)].")

Compact and the wise use of this Court's time and resources.[10]

V. THE SPECIAL MASTER'S FINDING THAT IMPLEMENTATION OF COLORADO'S USE RULES FOR THE 1997-99 PERIOD BROUGHT COLORADO INTO COMPLIANCE WITH THE COMPACT IS SUPPORTED BY THE MASTER'S FINDING THAT THE H-I MODEL IS NOT ACCURATE OR RELIABLE ON AN ANNUAL BASIS.

The Special Master recommends that the Court approve his finding that implementation of Colorado's Use Rules, and the replacement water provided thereunder, brought Colorado into compliance with its obligations under the Compact for the period 1997-99. Fourth Report 137, ¶4. Kansas takes exception to this recommendation on the basis that it depends on whether Compact compliance is to be measured over a period greater than one year. Kan. Br. 47. Kansas argues that an accounting period longer than one year is not consistent with the Compact, *id*., and states that its evidence, which was accepted by the Special Master for the purpose of this recommendation, showed a depletion of usable Stateline flows (and,

[10] Colorado courts also consider the impact of a change of water rights on Kansas' rights under the Arkansas River Compact. *Southeastern Colo. Water Conservancy Dist. v. Fort Lyon Canal Co.*, 720 P.2d 133, 150 (Colo. 1986) (reversing and remanding decrees for further factual findings regarding injury to other appropriators or violations of the Arkansas River Compact).

hence, a violation of the Compact) in 1997. *Id*.[11] However, the Special Master rejected Kansas' position that the model was sufficiently accurate to determine Compact compliance on an annual basis. Fourth Report 109-15. That finding is fully supported by the findings in the Fourth Report and is consistent with his conclusions during the liability phase. *See pages* 23-31, *supra; Kansas v. Colorado*, 514 U.S. at 684 (overruling Kansas' exception to the Special Master's conclusion that Kansas had failed to prove its claim regarding the Winter Water Storage Program); *id*. at 685-86 (overruling Kansas' exception to the Special Master's conclusion regarding the best of several methods to determine usable flow with the Kansas H-I model).

[11] The depletion of usable Stateline flows shown in Table 14 of Kansas Exhibit 1093, which is included as Exhibit 10 in the Appendix to the Fourth Report, is in 1998 rather than 1997. *See* Fourth Report 28. Over the whole three-year period, as found by the Special Master, the Kansas model did not indicate a shortage, but showed that usable accretions exceeded depletions by 2,819 acre-feet. *Id.* These results did not include replacement credits that Kansas agreed should have been allowed. *Id.* at 25. Nor did they include other changes that the Special Master has directed. *Id.* at 25-26. Nor do they include over 11,000 acre-feet of water that had been placed in the Offset Account in John Martin Reservoir for the benefit of Kansas, but which spilled. *Id.* at 26.

VI. THERE IS NO NEED FOR THE COURT TO DIRECT THE SPECIAL MASTER TO MAKE RECOMMENDATIONS ON THE FIFTEEN ISSUES LISTED BY KANSAS. THE SPECIAL MASTER PROPERLY CONCLUDED THAT IT WAS UNNECESSARY TO RESOLVE THOSE ISSUES AT THIS TIME.

Finally, Kansas states that the Special Master has recommended that Compact compliance be determined "using the version of the model approved at the conclusion of this trial segment," but made no recommendation on fifteen issues currently pending before him that are necessary to implement the H-I model or otherwise determine Compact compliance. Kan. Br. 47, quoting Fourth Report 117-18.[12] Kansas states that these are issues on which evidence and argument have been submitted and that continue to be disputed by the States. *Id.* Kansas argues that without a decision on the fifteen disputed issues, it is not possible to implement an "approved" version of the model or determine Compact compliance. *Id.* Kansas has grouped the fifteen disputed issues into three categories: (1) H-I model calibration issues, (2) 1997-99 accounting issues, and (3) future compliance issues. *Id.* at 48-49.

The Special Master concluded that it was unnecessary to resolve these issues for two reasons. First, with respect

[12] The quotation from the Fourth Report in the Kansas brief is a summary of Colorado's proposal during the trial, Fourth Report at 117-18, rather than the recommendation made by the Special Master, who recommended various changes to the model and directed the experts from both States to confer on others. *See id.* at 52-53, 79, 83-92.

to the disputed H-I model calibration issues and the disputed 1997-99 accounting issues, the Special Master concluded that resolution of these issues was not necessary to evaluate Compact compliance for 1997-99. Fourth Report 30-31. For that purpose, he relied on the Kansas model results for 1997-99, *id.* at 30-31, 94, which used Kansas' figures for irrigated acreage, supplemental acreage, and replacement water credits. *Id.* at 24-26, 94. Based on the Kansas evidence, he found that Colorado was not in violation of the Arkansas River Compact during the 1997-99 period. *Id.* at 31-32, 94.

Second, he found that future compact compliance, as he recommended, will be determined over a longer period of time sufficient for the Colorado water court to act. *Id.* at 94. The Special Master recommended that the Court retain jurisdiction for a limited period of time beyond the initial ten-year period that was part of Colorado's proposal for Compact compliance, thus providing an opportunity to determine how Colorado's Use Rules operate under different hydrologic conditions and, if necessary, to resolve modeling disputes, which would include the 1997-99 accounting issues and the disputed future compliance issues listed by Kansas. *Id.* at 136.

Further, with respect to model calibration issues, the Special Master concluded that some changes proposed by Colorado's expert appeared to have merit, but he felt that the specific changes proposed should not be made or he did not feel confident from the evidence presented in making a decision on a technical modeling issue. *Id.* at 89, 92. He also recognized that his rulings would require changes to the model and new calibration efforts, *id*. at 124, but also noted that the Court was not in a position to direct technically how the model should be calibrated. *Id.* Thus, rather

than resolve all of the remaining issues, he recommended that experts from both states confer on certain matters to see if they could reach agreement. *Id.* at 91-92; *see also id.* at 53-54, 85-86, 88, 89. The Special Master fully recognized that there may be some modeling issues that will need to be settled in the future applications of the H-I model, *id.* at 121-23, but stated that he did not mean to imply that all of these matters will become contentious issues. *Id.* at 123. Colorado believes that in doing so, the Special Master was attempting to counsel the parties that technical modeling issues are better suited to resolution by cooperative study and expert agreement than by litigation, *id*. at 123, and that some alternative method to resolve disputes, be it through the Arkansas River Compact Administration or binding arbitration, should be considered. *Id.* at 135, 136. Colorado agrees.

Colorado recognizes that the Court has an obligation to adjudicate cases between states under the Constitution where there are actual, existing controversies. *Oklahoma v. New Mexico*, 501 U.S. 221, 241 (1991). However, the Special Master concluded that it was unnecessary to resolve the fifteen issues listed by Kansas at this time and that additional evidence will be available that might make it unnecessary to resolve them in the future. This conclusion is fully supported by the findings in the Fourth Report.

CONCLUSION

The recommendations in the Special Master's Fourth Report are fully supported by the findings and conclusions in the Report, and he correctly interpreted the Court's intent when it sustained Colorado's request to change the date for awarding prejudgment interest from 1969 to 1985.

This case should be remanded to the Special Master in accordance with his final recommendation for preparation of a final decree consistent with the Court's opinion and the recommendations in the Fourth Report.

Respectfully submitted,

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users, but to the State of Kansas. In the absence of a knowing or intentional breach of the compact, Colorado argues that the State of Kansas should not be allowed to recover all of the losses, and prejudgment interest, at rates incurred by the water users. Finally, if prejudgment interest is to be awarded, the interest rate to be used "requires careful thought." Colo. Closing Br. at 110. Kansas experts used interest rates which reflected inflation and the opportunity costs to farmers to compound the losses attributed to farmers. *Id.*; Kan. Exh. 892, Section A at 28-29, Table 12. Colorado argues that the rate of interest applicable to the State of Kansas, which is lower, should have been used instead.

C. Legal Principles Governing an Award of Prejudgment Interest.

The award of prejudgment interest is not unique. As I concluded in my Second Report, a majority of jurisdictions now reject the traditional approach which allowed prejudgment interest only under statute or on a liquidated claim. Second Report at 106-07. A recent case states that prejudgment interest is now the "norm in federal litigation"; it is an "ordinary part of any award under federal law." *Matter of Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1331-32 (7th Cir. 1992), citing *West Virginia v. United States*, 479 U.S. 305, 310, 93 L.Ed.2d 639, 107 S.Ct. 702, 706 (1987); see also *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 655-56, 76 L.Ed.2d 211, 103 S.Ct. 2058, 2062-63 (1983); *Barbour v. Merrill*, 48 F.3d 1270, 1278-79 (D.C. Cir. 1995); *Lorenzen v. Employees Retirement Plan of Sperry & Hutchinson Co.*, 896 F.2d 228, 236 (7th Cir. 1990);

Gorenstein Enterprises, Inc. v. Quality Care-USA, Inc., 874 F.2d 431, 436-37 (7th Cir. 1989).

A recent patent case states:

> " . . . neither pre- nor postjudgment interest awards are unique to patent law. Many other areas of law besides patent law, including contract, tort, insurance, admiralty, employment, securities, and civil rights, also provide for prejudgment interest awards under both statutory and common-law authority." *Transmatic, Inc. v. Gulton Industries, Inc.*, 180 F.3d 1343, 1347 (Fed.Cir. 1999).

In a footnote the Court then provides the following citations: 15 U.S.C. §§ 15(a), 15a (1994) (antitrust); 17 C.F.R. § 201.600 (1994), *reprinted in* 15 U.S.C. foll. § 78u (securities); 29 U.S.C. § 1132(a)(9) (1994) (ERISA); *City of Milwaukee v. Cement Div. Nat'l Gypsum Co.*, 515 U.S. 189, 132 L.Ed.2d 148, 115 S.Ct. 2091 (1995) (admiralty); *United States v. Texas*, 507 U.S. 529, 123 L.Ed.2d 245, 113 S.Ct. 1631 (1993) (contract); *Milwaukee Brewery Workers' Pension Plan v. Jos. Schlitz Brewing Co.*, 513 U.S. 414, 130 L.Ed.2d 932, 115 S.Ct. 981 (1995) (ERISA); *Loeffler v. Frank*, 486 U.S. 549, 100 L.Ed.2d 549, 108 S.Ct. 1965 (1988) (Title VII); *Morales v. Freund*, 163 F.3d 763 (2nd Cir. 1999) (securities); *Gierlinger v. Gleason*, 160 F.3d 858 (2nd Cir. 1998) (§ 1983); *United States v. Township of Brighton*, 153 F.3d 307 (6th Cir. 1998) (CERCLA); *Cimino v. Raymark Indus., Inc.*, 151 F.3d 297 (5th Cir. 1998) (tort); *Fratus v. Republic W. Ins. Co.*, 147 F.3d 25 (1st Cir. 1998) (insurance).

Also there is now ample authority that prejudgment interest is not an added remedy, but simply is part of providing full compensation to the injured party. *West*

Virginia v. United States, 479 U.S. 305, 310 n. 2, 93 L.Ed.2d 639, 107 S.Ct. 702 (1987) ("Prejudgment interest serves to compensate for the loss of use of money due as damages from the time the claim accrues until judgment is entered, thereby achieving full compensation for the injury those damages are intended to redress."); *Transmatic, Inc. v. Gulton Industries, Inc.*, 180 F.3d 1343 (Fed. Cir. 1999), citing *West Virginia v. United States; United States v. City of Warren, Mich.*, 138 F.3d 1083, 1096 (6th Cir. 1998) ("An award of prejudgment interest 'is an element of complete compensation' in a Title VII back pay award," citing cases); *Chandler v. Bombardier Capital, Inc.*, 44 F.3d 80, 83 (2nd Cir. 1994) ("The purpose of a prejudgment interest award in a wrongful termination case is to compensate a plaintiff for the loss of use of money that the plaintiff otherwise would have earned had he not been unjustly discharged," citing cases); *Matter of Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1331 (7th Cir. 1992) ("Prejudgment interest is an element of complete compensation," citing *West Virginia v. U.S.* and other cases); *Northern Natural Gas Co. v. Grounds*, 393 F.Supp. 949, 991 (1974) ("The object of this phase of the litigation is to assure that just compensation be paid . . . [and] an award of prejudgment interest is required in order to assure this result.")

Prejudgment interest, as a legal matter, is intended to compensate injured parties both for the time value of the lost money as well as for the effects of inflation. *United States v. City of Warren, Mich.*, 138 F.3d 1083 (6th Cir. 1998). "Money today is not a full substitute for the same sum that should have been paid years ago." *Matter of Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1331 (7th Cir. 1992). "Prejudgment interest, like all monetary interest, is

simply compensation for the use or forbearance of money owed." *Transmatic, Inc. v. Gulton Industries, Inc.*, 180 F.3d 1343, 1347 (Fed. Cir. 1999). "Prejudgment interest is not awarded as a penalty; it is merely an element of just compensation." *City of Milwaukee v. Cement Division, National Gypsum, Co.*, 515 U.S. 189, 197, 132 L.Ed.2d 148, 115 S.Ct. 2091 (1995).

However, prejudgment interest lies within the sound discretion of the Court. It is not to be awarded according to any rigid theory of compensation for money withheld, "but is given in response to considerations of fairness." *Jackson County v. United States*, 308 U.S. 343, 352, 84 L.Ed. 313, 60 S.Ct. 285 (1939); *United States v. City of Warren, Mich.*, 138 F.3d 1083 (6th Cir. 1998); *Matter of Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1334 (7th Cir. 1992). There is also authority that a *denial* of prejudgment interest may be unfair, and should be justified. *City of Milwaukee v. Cement Division, National Gypsum Co.*, 515 U.S. 189, 132 L.Ed.2d 148, 115 S.Ct. 2091 (1995); *Matter of Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1334 (7th Cir. 1992). Prejudgment interest was denied on grounds of fairness in *Jackson County v. United States*, 308 U.S. 343, 84 L.Ed. 313, 60 S.Ct. 285 (1939); *Nedd v. United Mine Workers of America*, 488 F.Supp. 1208 (1980) ("Justice requires the disallowance of interest.")

D. Considerations in this Case Affecting Prejudgment Interest.

Kansas can argue persuasively, and has done so, that the law strongly supports the inclusion of prejudgment interest as part of a damage award. Likewise, there is no

doubt that fundamental economic principles require the same result. Yet there is no case in which prejudgment interest has been awarded that is at all similar to the facts in this dispute. Indeed, even damages as a potential remedy for the violation of an interstate water compact were not recognized until 1987 in *Texas v. New Mexico*, 482 U.S. 124, 96 L.Ed.2d 105, 107 S.Ct. 2279 (1987). When Kansas filed its complaint, it sought only a decree commanding Colorado "to deliver the waters of the Arkansas River in accordance with the provisions of the Arkansas River Compact." Not until the *Texas v. New Mexico* decision was the Kansas complaint amended to include a claim for damages.

Nonetheless, looking to the law generally and apart from interstate water disputes, the cases favor the inclusion of prejudgment interest as a component of damages, unless circumstances justify otherwise. Some cases specifically articulate a presumption in favor of such inclusion. *Barbour v. Merrill*, 48 F.3d 1270, 1279 (D.C. Cir. 1995); *Gorenstein Enterprises, Inc. v. Quality Care-USA, Inc.*, 874 F.2d 431, 436 (7th Cir. 1989); *Waterside Ocean Navigation Co. v. International Navigation Ltd.*, 737 F.2d 150, 154 (2nd Cir. 1984). Prior to *City of Milwaukee v. Cement Division, National Gypsum Co.*, 515 U.S. 189, 132 L.Ed.2d 148, 115 S.Ct. 2091 (1995), the courts had developed several criteria for the exercise of their discretion if such interest were to be denied: whether laches was present; whether there was a genuine dispute over a good faith claim in a mutual fault situation; whether the plaintiff had been less than diligent in prosecuting the action, or guilty of improper delaying tactics; whether the defendant had been unjustly enriched; whether prejudgment interest

would be compensatory rather than punitive. *Reeled Tubing, Inc. v. M/V Chad G*, 794 F.2d 1026, 1028 (5th Cir. 1986); *Segal v. Gilbert Color Systems, Inc.*, 746 F.2d 78, 82-83 (1st Cir. 1984); *Noritake Co., Inc. v. M/V Hellenic Champion*, 627 F.2d 724, 728-29 n. 3 (5th Cir. 1980); *Nedd v. United Mine Workers of America*, 488 F.Supp. 1208, 1219-20 (M.D. Pa. 1980).

Milwaukee, however, dismissed the argument of a good faith dispute as having "little weight," and stated that the Court was "unmoved" by the magnitude of the plaintiff's fault in a comparative negligence situation. 515 U.S. at 197, 199. Apart from the issue of delay, the courts actually have "done little to sketch the limits of acceptable discretion" in denying prejudgment interest. *Matter of Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1334 (7th Cir. 1992). Yet, one fundamental standard still appears to remain – that prejudgment interest is given "in response to considerations of fairness." *Jackson County v. United States*, 308 U.S. 343, 352, 84 L.Ed. 313, 60 S.Ct. 285 (1939). Likewise, the remedy in this case, taken as a whole, must be a "fair and equitable solution." *Texas v. New Mexico*, 482 U.S. 124, 134, 96 L.Ed.2d 105, 107 S.Ct. 2279 (1987).

The obvious difference between the many reported cases on prejudgment interest, and the facts at hand, is the great length of time between the first depletions of usable Stateline flow and a judgment. At least 50 years will be involved. Two cases have been found with a lag of 20 to 30 years between injury on some claims and judgment, but no longer period of time. *Wilkerson v. Ingalls Shipbuilding, Inc.*, 125 F.3d 904 (5th Cir. 1997); *Nedd v. United Mine Workers of America*, 488 F.Supp. 1208 (1980). And in each of these cases, although for reasons other

than the delay, interest was actually denied. Normally, either a statute of limitations or the application of laches would preclude a large buildup of prejudgment interest. That is not to say, however, that such interest cannot be large and exceed the basic claim. In the *Matter of Oil Spill by the Amoco Cadiz*, the Court upheld prejudgment interest of more than $120 million, accrued over 13 years, on a damage award of $61 million. 954 F.2d at 1330, 1335. And in *City of Milwaukee*, damages were $1.67 million, and prejudgment interest amounted to $5.3 million. 515 U.S. at 192. However, because prejudgment interest is an element of "full compensation," an award of such interest "no matter how large, cannot be called 'punitive.' " *Matter of Milwaukee Cheese Wisconsin, Inc.*, 112 F.3d 845, 849 (7th Cir. 1997).

Nonetheless, without some limitation, compounding even small damages over 50 years produces startling results. For example, the Kansas evidence shows additional pumping costs within the ditch service areas in 1950 amounting to only $103. Compounded to 1998, these damages become $4166. Kan. Exh. 1092, Table A18. Likewise, crop losses in 1950 amounted to only $2060 according to Kansas' evidence, but compensation sought for these losses is $83,594. Kan. Exh. 1092, Table C10. The H-I model has computed depletions in usable flow for 1950, and each year after, and Kansas turns those shortages into damages. Yet I am confident that in 1950, the first year after the compact was signed, and in the early years thereafter, no one had any thought that the compact was being violated. It was lawful in Colorado to drill wells without state permission, and Colorado farmers saw the

same kind of well development going on along the Arkansas River in Kansas.

In many of the prejudgment interest cases, the defendant has the money in hand, either wrongfully withheld or wrongfully collected from the plaintiff, and thus has the use of the money until final judgment. Prejudgment interest prevents such a defendant from profiting from the wrong. *Gore, Inc. v. Glickman*, 137 F.3d 863 (5th Cir. 1998); *Matter of Oil Spill by the Amoco Cadiz*, 954 F.2d 1279 (7th Cir. 1992). The situation here is different. The benefits of the usable flows withheld went primarily to Colorado farmers, not to the State of Colorado. Likewise, except for taxes lost to the State of Kansas and the secondary impacts to the Kansas economy, both of which are relatively small, the additional costs and crop losses were suffered by Kansas farmers, yet damages go to the state. Prejudgment interest here neither takes from those who benefitted, nor goes to those who were injured. Kansas, of course, does not see this as a meaningful distinction. For 50 years, it argues, Colorado has had the advantage of water belonging to Kansas, and should not now be allowed to gain from compact violations. That there have been gains, both to Colorado farmers and to the State of Colorado, is not in doubt. Surely that is why Colorado opposed the legal position taken by Kansas, namely, that damages be determined on the basis of gains in Colorado rather than injury to Kansas. I ruled against Kansas on this issue (see Exhibit 1 in the Appendix) but we should not be oblivious to Colorado's use of the water over this long period of years.

An interstate water compact, besides being federal law, is a contract. *Texas v. New Mexico*, 462 U.S. 554, 564,

77 L.Ed.2d 1, 103 S.Ct. 2558 (1983). Though a compact deals in water rather than money, many of the same policies calling for prejudgment interest in general contract situations also apply to interstate water disputes. The upstream state has a natural geographic advantage. It has first access to the water. It can take what it wants, leaving the downstream state to complain if the upstream use exceeds its compact share. An enforcement action by the downstream state is not only difficult and expensive, it almost always requires years to complete. Generally, a preliminary injunction is not available, and the upstream state continues to have use of water during the long trial. In many situations, the problem begins with the compact itself, which may be quite vague. The Arkansas River Compact, for example, does not allocate to Kansas either a defined quantity of water or a specific share of river flow. Rather, it calls for an "equitable" division, and only places restrictions on new Colorado water development that will cause material depletions of usable flows into Kansas. The problems of data collection are also enormous. In this case, new wells were the principal cause of the Stateline depletions. But, initially, there were no records of the number of wells, where they were located, or how much water they pumped. All of these data, and much more, had to be developed before specific determinations of well impacts could be made.

I am convinced, in general, that prejudgment interest adjusting for inflation and for the loss of use of funds owed should be included in any damage award for violation of an interstate water compact. I have difficulty, however, in recommending the full amount sought by Kansas in this case. Given the long delay here, and the

dramatic impact of compounding over so many years, fairness would seem to deny at least a portion of prejudgment interest during the early years when neither state understood that depletions were occurring. Colorado contends that it was not aware of a compact violation until at least 1984. Colo. Closing Br. at 107. I disagree. I find that by 1968 Colorado knew, or should have known, that postcompact wells were causing material depletions of usable Stateline flows. It is essentially correct that Kansas did not register a formal complaint until 1985, but that is not to say that Colorado was unaware of the impact of its postcompact pumping until that time.

Prior to 1965 Colorado had no system for the regulation of groundwater water. While surface diversions had required state permits since the 1800s, and were closely regulated on a "first in time, first in right" basis, wells could be drilled without state permission and even without the state's knowledge. Nor were any reports required of the amounts pumped. Colorado's evidence showed that some 1233 new large irrigation wells were drilled along the Arkansas River between 1949 and 1965. Colo. Exh. 165*, Table A1. Colorado's database constructed for the trial estimated that pumping in 1950 amounted to 41,458 acre-feet, and had increased to 203,925 acre-feet in 1964. *Id.*

The pressure to regulate groundwater pumping came first, not from Kansas, but from holders of downstream surface diversion rights in Colorado, and resulted in 1965 state legislation. Under this new legislation, the State Engineer was ordered to administer wells along the Arkansas River in accordance with the doctrine of prior appropriation, that is, to subordinate new wells to prior

surface diversion rights. Colo. Exh. 378. The State Engineer's first effort to enforce the new law, however, was struck down by the Colorado Supreme Court. *Fellhauer v. People*, 167 Colo. 320, 447 P.2d 986 (1968). Further legislation then resulted in a comprehensive study of both surface diversions and groundwater pumping along the Arkansas River, known as the 1968 Wheeler Report. Jt. Exh. 92. This Report, which was published at the direction of the state legislature, found that well use in recent years had "materially decreased the surface flows available to direct flow and storage rights." *Id.* at vi. The Wheeler Report and more state legislation led finally to new rules limiting pumping to three days a week, without mitigation measures to protect prior rights. Jt. Exh. 93. While these Colorado efforts were aimed at protecting downstream surface diversions in Colorado from the impacts of new and excessive pumping, Colorado had to know that the impacts on the other side of the Stateline in Kansas were no different.

During the liability phase of the trial, Colorado sought to bar Kansas from any relief, claiming that the facts concerning well development in Colorado were common knowledge by the mid-1960s, and that Kansas was guilty of laches. That contention has a double edge. Colorado is in no position now to claim that it was unaware of the problems caused by unregulated pumping until at least 1984.

With regard to the issue of fairness, Kansas itself recently argued that Kansas gas producers should not be responsible for prejudgment interest on refunds of payments that were made in reliance upon a decision of the Federal Energy Regulatory Commission that was lawful

at the time. *Anadarko Petroleum Corp. v. FERC*, 196 F.3d 1264 (D.C.Cir. 1999). Federal law established maximum prices on certain natural gas sales, but allowed an excess charge to recover state severance taxes. FERC ruled that a Kansas ad valorem tax was such a severance tax, and accordingly allowed higher prices. However, this ruling was challenged in 1983, and in 1988 the Court held that the FERC rule "fell short of reasoned decision-making." *Colorado Interstate Gas Co. v. FERC*, 850 F.2d at 769, 770 (D.C. Cir. 1988). The case was remanded to allow the Commission to show what would be required for a tax to be similar to a production or severance tax. Five years passed before FERC acted on the remand, and then the Commission simply reversed its earlier decision, and ordered repayment of all excess charges after 1988, together with interest. Interest charges amounted to 160 percent of the principal.

Kansas sought to have all producers relieved of the interest charges because: "the litigation has gone on forever;" the Commission was responsible for much of the delay; and the producers had relied upon the Commission's settled view that the Kansas ad valorem tax was a severance tax. *Anadarko Petroleum Corp. v. FERC*, 196 F.3d at 1268. The Court of Appeal was not persuaded, stating that neither the Commission's legal errors nor its "snail-like pace" were grounds for changing the producers' interest obligations. *Id.* It was the customers, ruled the Court, who had paid more than they should, and who were entitled to be made whole. Quoting *Matter of Milwaukee Cheese Wisconsin, Inc.*, the Court said: "Compensation deferred is compensation reduced by the time value of money." *Id.* at 1267.

The general lack of knowledge in the early years about pumping in Colorado and its impacts along the Arkansas River served to protect Kansas during the liability phase of the case against a claim of laches. The same degree of fairness, I believe, should now relieve Colorado of the obligation to pay full interest rates on damages from depletions during 1950-68 period, which now only with hindsight and the benefit of sophisticated computer modeling can be found to have occurred.

Kansas argues that Colorado's awareness, or lack of awareness, of compact violations during the early years should have no bearing here. They contend that Colorado's knowledge would be a consideration only if prejudgment interest were part of a punitive damage award rather than an element of compensatory damages. As a policy issue, they also say that compact compliance is hardly encouraged if an upstream state is better off the less it knows. But Kansas fails to acknowledge that it too was involved. Neither state in the early years saw any wrongdoing, or thought that Kansas was not receiving its compact share of usable flows of the Arkansas River. Under these circumstances, it does not now seem fair to impose compound interest rates for that period of time.

There is, however, another consideration in the award of prejudgment interest during these early years. Three elements can be involved in any such award: an interest rate to reflect the loss of use of money owed; a rate to reflect inflation; and a risk factor, although that is not applicable here. Denial of "prejudgment interest" during the 1950-68 period would ordinarily mean that only "nominal" damages would be recovered, that is, only the actual dollar values at the time of the loss. But

here, Colorado itself states that a "fair and equitable remedy" would adjust all damages for inflation. Colo. Closing Br. at 110. Also, Colorado's chief expert Professor Wichelns, speaking as an economist, testified to the need to adjust past values to account for inflation. RT Vol. 199 at 19. Given the Colorado position, I thus recommend that actual damages for the period 1950-68 should be adjusted for inflation, but should not bear compound interest reflecting the loss of use of those monies.

E. Conclusion.

Kansas' damages, as determined in earlier Sections of this Report, should include prejudgment interest at rates proposed by Kansas, but only from 1969 to the date of judgment. These rates properly include inflation and the loss of use of money due as damages. Damages incurred during the 1950-68 period should be adjusted for inflation only using rates proposed by Kansas.