

**In the Supreme Court of the United States**

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STATE OF KANSAS, PLAINTIFF

*v.*

STATE OF NEBRASKA

AND

STATE OF COLORADO

---

**ON MOTION TO DISMISS**

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**BRIEF FOR THE UNITED STATES  
AS AMICUS CURIAE IN OPPOSITION TO THE  
MOTION TO DISMISS**

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**QUESTION PRESENTED**

Whether the Republican River Compact restricts a compacting State's consumption of groundwater.

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**INTEREST OF THE UNITED STATES**

The United States has a significant interest in the interpretation of the Republican River Compact. The States of Colorado, Kansas, and Nebraska entered into this Compact to apportion an interstate stream and to provide the basis for orderly planning and development of federal flood control and irrigation projects. Federal officials participated in the formulation of the Compact, and Congress ultimately approved the Compact pursuant to the Compact Clause of the Constitution, Art. I, § 10, Cl. 3. This Court invited the Solicitor General to express the views of the United States in response to Kansas's motion for leave to file a bill of complaint, 119 S. Ct. 36 (1998), and the United States urged the Court to grant Nebraska leave to file a motion to dismiss in order to resolve the central issue of whether the Compact

restricts a compacting State's consumption of groundwater. See U.S. Amicus Br. 16-20 (Dec. 1998).

### STATEMENT

The State of Kansas has filed an original action to enforce its rights under the Republican River Compact, which was approved by Congress in the Act of May 26, 1943, ch. 104, 57 Stat. 86. See Add. 1a-12a. The Compact allocates the “virgin water supply” of the Republican River Basin for use within the States of Colorado, Kansas, and Nebraska. See Compact Arts. II-IV (Add. 3a-7a). Kansas alleges that Nebraska has exceeded its Compact allocation by allowing pumping and consumption of groundwater that should be included as part of the allocated water supply. See Compl. para. 7; Br. in Support of Compl. 2. Nebraska has denied that allegation, see Neb. Answer para. 7, and has additionally argued, among other defenses and counterclaims, that the Compact does not restrict Nebraska's right to consume groundwater, *id.* para. 18. With the leave of this Court, Nebraska has filed a motion to dismiss, in the nature of a motion under Rule 12(b)(6) of the Federal Rules of Civil Procedure, limited to the question whether the Republican River Compact restricts a State's consumption of groundwater. See Neb. Br. in Support of Mot. to Dis. (Neb. Br.).

#### A. The Republican River Basin

The Republican River Basin is a 24,900 square mile watershed, approximately 430 miles in length, that encompasses parts of northeastern Colorado (7700 square miles), southwestern Nebraska (9700 square miles), and northern Kansas (7500 square miles). The Basin is drained by the Republican River, which is formed by the junction of two streams that originate in Colorado, the Arikaree and North Fork Republican Rivers. From that originating point, near Haigler, Nebraska, the Republican River flows easterly through Nebraska and then southeasterly to Junction City, Kansas,

where it joins the Smoky Hill River to form the Kansas River. The Republican River Basin also includes numerous smaller streams that flow into the Republican River. The Basin, which is part of the Great Plains, is sparsely populated. It contains fertile farmland and typically receives from 18 to 30 inches of precipitation per year. See Bureau of Reclamation, U.S. Dep't of Interior, *Resource Management Assessment: Republican River Basin* 3-6, 43, 44-48 (July 1996) (A copy of this report has previously been lodged with the Clerk of the Court.).

During the 1930s, the United States, as well as the States of Colorado, Kansas, and Nebraska, developed an interest in harnessing the water resources of the Republican River Basin. The Basin had experienced an extended drought, interrupted in 1935 by a deadly and destructive flood. In light of those experiences, the federal and state governments examined whether the Republican River's spring flows could be impounded in reservoirs for flood control and released in the late summer and fall for irrigation. See H.R. Doc. No. 842, 76th Cong., 3d Sess. (1940) (Corp of Engineers' preliminary examination and survey of the Republican River); see also H.R. Doc. No. 195, 73d Cong., 2d Sess. 158-186 (1934) (Corps of Engineers' preliminary examination and survey of the Kansas River, discussing irrigation potential in the Republican River Basin). Based on the Corps of Engineers' recommendations in House Document No. 842, Congress authorized appropriations to construct the Harlan County Reservoir, in Nebraska, for flood control purposes. See Act of Aug. 18, 1941, ch. 377, 55 Stat. 646.

The Interior Department's Bureau of Reclamation, which has primary responsibility for irrigation projects, also studied the Republican River Basin, relying in part on the Corps of Engineers' examination set forth in House Document No. 195, *supra*. See Bureau of Reclamation, U.S. Dep't of Interior, *Project Investigations Report No. 41*, at 1-2 (1940). The Bureau concluded that federal irrigation pro-

jects were feasible. *Id.* at A-D (Synopsis). It indicated, however, that those projects should not be constructed until the three States had resolved the question of interstate allocation of the Basin’s water resources. *Id.* at 1 (“To avoid expensive litigation as a result of possible conflicting uses of water in the various states, further developments for irrigation should be preceded by a three-state compact or other similar agreement on use of water.”). Meanwhile, the States of Colorado, Kansas, and Nebraska, which had been discussing the possibility of an interstate agreement for a number of years, entered into negotiations to formulate an interstate compact.<sup>1</sup>

### **B. The Compact Approval Process**

In 1941, the States completed their negotiations and ratified a proposed compact, which they then submitted to Congress for approval in accordance with the Compact Clause of the Constitution, Art. I, § 10, Cl. 3. See S. 1361, 77th Cong., 1st Sess. (1941); H.R. 5945, 77th Cong., 1st Sess.

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<sup>1</sup> The States initially sought congressional authorization to enter into a compact before they had negotiated its terms. See H.R. J. Res. 406, 76th Cong., 3d Sess. (1940); see also 86 Cong. Rec. 58 (1940) (remarks of Rep. Curtis). The Department of War objected on the ground that Congress should not give its consent to a compact without knowing its content, and the House Committee on Flood Control responded by amending House Joint Resolution 406 to require congressional approval before the compact could take effect. See H.R. Rep. No. 2707, 76th Cong., 3d Sess. (1940). That resolution, however, did not pass, and the States entered into negotiations without advance congressional authorization or direct participation by the federal government. See 87 Cong. Rec. A2179 (1941) (remarks of Rep. Curtis). The state representatives met eight times between May 28, 1940, and March 19, 1941, to formulate a compact. See Glenn L. Parker, *The First Republican River Compact* (1943) (collecting minutes of the first through eighth meetings of the Compact Commissioners) (available from the U.S. Geological Survey Library, Dep’t of the Interior: 798(200) R29 1943). We have reprinted the minutes of those eight meetings in Addendum B of this brief. See Add. 13a-42a. See also note 2, *infra*.

(1941); S. Rep. No. 841, 77th Cong., 1st Sess. (1941). The Department of the Interior and the Federal Power Commission objected to the compact primarily because it contained language curtailing federal jurisdiction over the Republican River. See *Republican River Compact: Hearings on H.R. 4647 and H.R. 5945 Before the House Comm. on Irrigation and Reclamation*, 77th Cong., 1st Sess. 1-4 (1941) (*H.R. 4647 Hearings*).

The House Committee on Irrigation and Reclamation amended the House bill in response to the federal agencies' objections, H.R. Rep. No. 1380, 77th Cong., 1st Sess. (1941), but the Senate rejected the House amendments, 87 Cong. Rec. at 9606-9623. The Senate's proposed legislation prevailed in conference, and the Senate and the House approved the conference proposal. See H.R. Conf. Rep. No. 1878, 77th Cong., 2d Sess. (1942); 88 Cong. Rec. at 2408-2409; *id.* at 2813-2814. The President, however, vetoed the bill on the basis of the federal agencies' objections. See *id.* at 3285-3286; H.R. Doc. No. 690, 77th Cong., 2d Sess. (1942) (veto message). The President explained that he "would be glad to approve a bill, which, in assenting to the compact, specifically reserves to the United States all of the rights and responsibilities which it now has in the use and control of the waters of the basin." *Id.* at 2.

Following the President's veto, Congress enacted legislation authorizing state commissioners to conduct further compact negotiations and providing for participation by a federal representative. See Act of Aug. 4, 1942, ch. 545, 56 Stat. 736. The state commissioners and the federal representative, Glenn L. Parker, met on two additional occasions and completed their negotiations on December 31, 1942.<sup>2</sup> The

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<sup>2</sup> See Colorado Water Conservation Board, *The Republican River Compact* (1943) (collecting minutes of the ninth and tenth meetings of the Compact Commissioners) (available from the U. S. Geological Survey Library, Dep't of the Interior: 798(200) R29 1943). We have reprinted the

revised compact retained the water allocations of the previous compact, but added new provisions addressing the federal interests. Compare Add. 1a-12a with H.R. Doc. No. 690, *supra*, at 2-5. The state legislatures of Colorado, Kansas, and Nebraska promptly ratified the proposed compact. See Colo. Rev. Stat. Ann. §§ 37-67-101 *et seq.* (West 1990); Kan. Stat. Ann. § 82a-518 (1991); 2A Neb. Rev. Stat. App. § 1-106 (1995). The States then submitted the agreement to Congress for approval in accordance with the Compact Clause and the Act of Aug. 4, 1942. Congress held hearings, reported favorably on the proposed compact, and passed a bill granting congressional approval, which the President signed. Act of May 26, 1943, ch. 104, 57 Stat. 86.<sup>3</sup>

### C. The Republican River Compact

The Republican River Compact consists of eleven articles that set out a mechanism for dividing the water supply of the Republican River Basin and address issues arising from the prescribed allocation.

Article I identifies the purposes of the Compact as follows: (1) “to provide for the most efficient use of the waters of the Republican River Basin”; (2) “to provide for an equitable division of such waters”; (3) “to remove all causes, present and future, which might lead to controversies”; (4) “to promote interstate comity”; (5) “to recognize that the most

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minutes of those two meetings in Addendum B of this brief (Add. 13a-80a). See Add. 43a-80a. See also note 1, *supra*.

<sup>3</sup> See S. 649, 78th Cong., 1st Sess. (1943); H.R. 1679, 78th Cong., 1st Sess. (1943); H.R. 2482, 78th Cong., 1st Sess. (1943); *Flood Control in the Basin of the Republican River: Hearing on S. 649 Before the Senate Comm. on Irrigation and Reclamation*, 78th Cong., 1st Sess. (1943) (S. 649 Hearing); *Republican River Compact: Hearings on H.R. 1679 and H.R. 2482 Before the House Comm. on Irrigation and Reclamation*, 78th Cong., 1st Sess. (1943) (H.R. 1679 Hearings); S. Rep. No. 152, 78th Cong., 1st Sess. (1943); H.R. Rep. No. 375, 78th Cong., 1st Sess. (1943); 89 Cong. Rec. 3549-3551 (1943) (Senate passage); *id.* at 4534-4536 (House passage); *id.* at 4907 (Presidential approval).

efficient utilization of the waters within the Basin is for beneficial consumptive use”; and (6) “to promote joint action by the States and the United States in the efficient use of water and the control of destructive floods.” Add. 2a.

Article II clarifies the meaning of relevant terms. It defines the “Basin” as “all the area in Colorado, Kansas, and Nebraska, which is naturally drained by the Republican River, and its tributaries, to its junction with the Smoky Hill River in Kansas,” and incorporates by reference a map showing the Basin. Add. 3a. Article II defines the “Virgin Water Supply” to be “the water supply within the Basin undepleted by the activities of man.” *Ibid.* And it correspondingly defines “Beneficial Consumptive Use” to be “that use by which the water supply of the Basin is consumed through the activities of man.” *Ibid.*

Article III next specifies the “computed average annual virgin water supply” of a series of specific drainage areas within the Basin, which in aggregate amount to a total estimated water supply of 478,900 acre-feet per year. Add. 4a. Those computed averages, expressed in acre-feet of water, represent the historic virgin water supply originating above “the lowest crossing of the [Republican River] at the Nebraska-Kansas state line.” *Ibid.* The Compact relies on those historic water supply averages as the basis for allocating future supplies among the States. Article III recognizes, however, that year-to-year flows may vary, and it accordingly states that “[s]hould the future computed virgin water supply of any source vary more than ten (10) per cent from the virgin water supply as hereinabove set forth, the allocations hereinafter made from such source shall be increased or decreased” proportionately. *Ibid.*

Article IV sets out the allocation for use in each State, expressed in acre-feet per year, for each of the drainage areas that Article III identifies. Add 5a-7a. Article IV allocates the entire estimated virgin water supply set forth in Article III, giving Colorado an aggregate of 54,100 acre-

feet per year (Add. 5a), Kansas an aggregate of 190,300 acre-feet per year (Add. 5a-6a), and Nebraska an aggregate of 234,500 acre-feet per year (Add. 6a-7a). In addition, Article IV recognizes that Kansas is entitled to “the entire water supply originating in the Basin downstream from the lowest crossing of the river at the Nebraska-Kansas state line.” Add. 6a.

Articles V through IX set forth various rights and obligations relating to the allocation. Add. 7a-8a. Article V recognizes the continuing vitality of a prior judgment of this Court, *Weiland v. Pioneer Irrigation Co.*, 259 U.S. 498 (1922), which involved a dispute between Colorado and a Nebraska irrigation district over the district’s diversion of water in Colorado for use in Nebraska. See Add. 7a. Articles VI through VIII allow a downstream State (or its citizens) to construct water storage facilities in an upstream State, provided that certain conditions are observed. See Add. 7a-8a. Article IX obligates the States to administer the Compact through appropriate officials and “to collect and correlate through such officials the data necessary for the proper administration of the provisions of this compact.” Add. 8a. It also provides that those officials “may, by unanimous action, adopt rules and regulations consistent with the provisions of this compact,” and it directs the United States Geological Survey to assist state officials in the collection and correlation of data. Add. 8a.

Articles X and XI address issues of federal authority that had prompted the President’s veto of the previous compact proposal. Add. 9a-10a. Article X states that nothing in the Compact shall (a) impair federal rights, power, or jurisdiction over waters of the Basin; (b) subject the United States to state taxes or require the United States to reimburse the States for lost tax revenues resulting from federal water development projects; or (c) subject any property of the United States to state law that would not apply in the absence of the Compact. Add. 9a. Article XI

provides, in essence, that (a) any beneficial consumptive use by the United States within a State shall be charged against the State's compact allocation; (b) when exercising its paramount powers, the United States shall recognize, to the extent consistent with the best utilization of the waters for multiple purposes, that beneficial consumptive use is of paramount importance to the development of the Basin; and (c) the United States will respect valid, pre-existing beneficial consumptive uses. Add. 9a-10a.

#### **D. Post-Compact Development**

After approving the Compact, Congress authorized a system of federal water development and management projects as part of the Missouri River Basin Development Program. See Flood Control Act of 1944, ch. 665, § 9, 58 Stat. 891. This Program, also known as the Pick-Sloan Plan, authorizes the Army Corps of Engineers and the Bureau of Reclamation to construct and operate a coordinated system of reservoirs for multiple purposes, including irrigation, flood control, power development, fish and wildlife protection, and recreation. See S. Doc. No. 247, 78th Cong., 2d Sess. (1944).

Between 1945 and 1964, the United States constructed nine federal reservoirs in the Republican River Basin. The Corps of Engineers completed the previously authorized Harlan County Reservoir in Nebraska (see page 3, *supra*) and the Milford Reservoir in Kansas. The Bureau of Reclamation established four water resource development divisions, which include seven reservoirs in Kansas and Nebraska. The Bureau's projects, operated in conjunction with the Corps' Harlan County facilities, provide water to six irrigation districts and service 136,528 acres of farmland in the Republican River Basin. Those projects and the Corps' Harlan County and Milford projects also support a variety of other purposes, including flood control, recreation, and fish and wildlife needs. See *Resource Management Assessment: Republican River Basin, supra*, at 4-5, 13-23.

### E. The Current Controversy

The Republican River Compact imposes limitations on the quantity of water that Colorado and Nebraska may divert from the Republican River and its tributaries, based on an apportionment of the “virgin water supply.” In accordance with Article IX of the Compact, the States have designated officials to administer the Compact’s allocation limits. Beginning in 1959, the States each appointed a representative to a three-member administrative body, designated the Republican River Compact Administration (RRCA), to compute the Basin’s annual virgin water supply, which would in turn allow the States to determine, retrospectively, whether each State has stayed within its annual allocation. See RRCA, *First Annual Report for the Year 1960* (Apr. 4, 1961).<sup>4</sup> The RRCA has since published and updated formulas for computing the virgin water supply and consumptive use. See RRCA, *Formulas for the Computation of Annual Virgin Water Supply and Consumptive Use, August 19, 1982* (rev. June 1990) (*Formulas*).<sup>5</sup>

Since 1959, the States have debated the extent to which groundwater usage should be included in determining whether a State has exceeded its allocation. Kansas has asserted that groundwater usage should be included to the extent that it reduces the amount of water that would be available for diversion from the sources identified in the Compact, either by intercepting groundwater contributions to the surface flow of the Republican River and its tributaries, or by syphoning water from those sources. As part of its

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<sup>4</sup> The Compact itself does not establish the RRCA. The three States created the RRCA to carry out the powers conferred upon them by Article IX to administer the Compact through an appropriate official in each State.

<sup>5</sup> Relevant excerpts of the RRCA’s First Annual Report and the current formulas for calculating the virgin water supply are reproduced in Addenda C and D. See Add. 81a-102a, 103a-114a.

First Annual Report, the RRCA elected to include in its calculations groundwater that is pumped “from the alluvium along the stream channels.” Committee on Procedure & Computation of Annual Virgin Water Supply, *Formulas for the Computation of Annual Virgin Water Supply* 3 (Apr. 4, 1961) (Add. 97a). The RRCA decided, however, not to include at that time pumping from upland areas known as “table-lands.” *Ibid.* It concluded that “[t]he determination of the effect of pumping by ‘table-land’ wells on the flows of the streams in the Republican River Basin must await considerably more research and data regarding the character of the ground-water aquifers and the behavior of ground-water flow before even approximate information is available as to the monthly or annual effects on stream flows.” *Ibid.*

Since publishing its First Annual Report, the RRCA has been unable to make further progress on the appropriate treatment of groundwater under the Compact. In recent years, Kansas and Nebraska have strongly disagreed on the issue. Because the three-member RRCA can adopt regulations only through “unanimous action,” Compact Art. IX (Add. 8a), the RRCA has not resolved the dispute. Instead, it has retained, virtually verbatim, the statement on groundwater set forth in the 1961 report. See *Formulas* 7 (Add. 108a). Indeed, apparently as a result of this dispute between Kansas and Nebraska, the RRCA has ceased to calculate the virgin water supply and state compliance with allocation limits. Compare Neb. Br. in Opp. to Compl. 16-17 with Kan. Reply Br. 7-8; Neb. Counterclaims paras. 13, 20-23.

Kansas seeks relief from this Court. It asserts that Nebraska has violated the Compact by “allowing the proliferation and use of thousands of wells hydraulically connected to the Republican River and its tributaries,” which has “resulted in the appropriation by the State of Nebraska of more than its allocated equitable share of the waters of the Republican River” and has “deprived the State of Kansas of its full entitlement under the Compact.” Compl.

para. 7; see Kan. Br. in Support of Compl. 12-14. Nebraska argues that Kansas's complaint should be dismissed because the Republican River Compact does not restrict a State's consumption of groundwater. Br. in Support of Mot. to Dis. 5-19.

### SUMMARY OF ARGUMENT

Nebraska's motion to dismiss presents the core legal question that lies at the heart of this interstate dispute. Nebraska contends that, because the Republican River Compact does not expressly apportion groundwater, it places no restriction on a compacting State's groundwater usage. That contention is wrong.

The Compact apportions the Republican River Basin's virgin water supply by reference to the Basin's stream flows. As this Court's decisions recognize, science has established that stream flows consist of both surface runoff and groundwater discharge. See *Cappaert v. United States*, 426 U.S. 128, 142-143 (1976). That scientific principle was well established at the time that Colorado, Nebraska, and Kansas negotiated the Republican River Compact. Indeed, the minutes of the Compact negotiations show that the principle was specifically known to the state representatives who formulated the Compact.

Kansas is entitled to seek relief under the Compact on the theory that Nebraska must include within its allocation both direct diversions of the apportioned stream flows and also groundwater usage that diminishes those stream flows. That theory is consistent with the text of the Compact, which defines the virgin water supply as the "water supply within the Basin undepleted by the activities of man." Art. II (Add. 3a). It would be inequitable, and harmful to the investment-backed expectations of the downstream States, if an upstream State could augment its apportionment by simply intercepting a component of the allocated stream flows before those flows are measured. The compacting

States have demonstrated an understanding, in the course of administering the Compact, that their apportionments should take into account groundwater consumption that affects the virgin water supply. That construction of the Republican River Compact is consistent with the construction that this Court has given to the Arkansas River Compact in *Kansas v. Colorado*, No. 105, Original, and to the Pecos River Compact in *Texas v. New Mexico*, No. 65, Original.

Nebraska is accordingly mistaken in contending that the Republican River Compact places no limitations on groundwater consumption. Kansas is entitled to relief if it can demonstrate, as a factual matter, that Nebraska's consumption of groundwater has resulted in Nebraska's exceeding its Compact allocation. A Special Master should be appointed to address that factual question as well as the other outstanding issues in this original action.

#### ARGUMENT

#### **THE REPUBLICAN RIVER COMPACT RESTRICTS A STATE'S CONSUMPTION OF GROUNDWATER THAT CONTRIBUTES TO THE "VIRGIN WATER SUPPLY" OF THE REPUBLICAN RIVER BASIN**

Nebraska has moved to dismiss Kansas's complaint based on Nebraska's assertion that the Republican River Compact imposes no limits on a compacting State's consumption of groundwater. Nebraska's motion places before this Court a discrete and controlling question of law that has precipitated this original action. That question of law can be resolved at this preliminary stage of the litigation through the application of familiar principles of compact construction.<sup>6</sup>

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<sup>6</sup> For purposes of this motion, which is in the nature of a motion to dismiss under Rule 12(b)(6) of the Federal Rules of Civil Procedure, Kansas's factual allegations are assumed to be true. See, e.g., *Neitzke v. Williams*, 490 U.S. 319, 326-327 (1989). As Nebraska correctly notes (Neb.

The Republican River Compact is a congressionally authorized interstate agreement and is therefore both a contract and a law of the United States. See *New Jersey v. New York*, 523 U.S. 767, 811 (1998); *Oklahoma v. New Mexico*, 501 U.S. 221, 235 n.5 (1991); *Texas v. New Mexico*, 482 U.S. 124, 128 (1987). As with other interstate compacts, if the text, read in light of its context, is unambiguous, it is conclusive. See, e.g., *New Jersey v. New York*, 523 U.S. at 811; *Kansas v. Colorado*, 514 U.S. 673, 690 (1995); *Texas v. New Mexico*, 462 U.S. 554, 567-568 (1983). If the text is ambiguous, the Court may consider other reliable indicia of the parties' intent, including the minutes of the compact negotiations and materials submitted to Congress in support of congressional approval. See e.g., *Oklahoma v. New Mexico*, 501 U.S. at 235 n.5; *Texas v. New Mexico*, 462 U.S. at 568 n.14; *Arizona v. California*, 292 U.S. 341, 359-360 (1934). The Court may also consider the parties' practical construction and application of the Compact's terms. See, e.g., *Air France v. Saks*, 470 U.S. 392, 396 (1985); *New Jersey v. New York*, 523 U.S. at 830-831 (Scalia, J., dissenting).

Nebraska has correctly recognized that the Court's "first and last order of business" here is interpreting the Republican River Compact. Neb. Br. 6 (quoting *New Jersey v. New York*, 523 U.S. at 811). Nebraska is mistaken, however, in its understanding of the compact's terms. Nebraska argues that the Compact places no restriction on Nebraska's consumption of groundwater because: (1) the Compact does not apportion groundwater among the compacting States (Neb. Br. 5-10); (2) the Court and the parties have manifested an understanding that the Compact allocates surface water (*id.* at 11-15); and (3) the uncontroverted actions of the parties

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Br. 5), the Court may also "tak[e] notice of items in the public record." *Papsan v. Allain*, 478 U.S. 265, 268 n.1 (1986). Those items include the official minutes of the Compact negotiations and the annual reports of the RRCA. See Add. 13a-114a.

demonstrate that they did not intend to apportion groundwater (*id.* at 16-19). Those contentions, however, do not answer Kansas's complaint.

Kansas seeks relief on the ground that the Republican River Compact allocates the "virgin water supply" of the Republican River Basin, which the Compact measures in terms of Basin stream flows. See Arts. II-IV (Add. 3a-7a). The United States agrees with Kansas that those stream flows necessarily consist of contributions from surface runoff and groundwater discharge. The Compact accordingly restricts a State's consumption of groundwater that diminishes the virgin water supply, and Kansas can obtain legal relief under the Compact if it can show, as a matter of fact, that Nebraska's groundwater consumption has that effect.

**A. The Republican River Compact Apportions The Virgin Water Supply, Which Consists Of Stream Flows Originating From Both Surface Runoff And Groundwater Discharge**

The Republican River Compact expressly apportions the "virgin water supply" of the Republican River Basin, which the Compact defines as the "the water supply within the Basin undepleted by the activities of man." Art. II (Add. 3a). There is no dispute among the parties that the Compact measures and allocates the virgin water supply on the basis of historic annual stream flows, measured in acre-feet per year. See Arts. III-IV (Add. 4a-7a). The minutes of the Compact negotiations indicate that the Compact Commissioners calculated the water supply and allocations on the basis of federal and state stream flow data. See Add. 20a, 21a-24a, 30a-31a. In that limited sense, Nebraska is correct that the Compact apportions surface water and does not identify groundwater, *in situ*, as a separately apportioned resource. But Nebraska's claim that the Compact does not apportion groundwater as such does not respond to Kansas's specific complaint.

Kansas's claim for relief is not predicated on the notion that the Compact directly apportions groundwater, as a distinct resource, among the compacting States. Kansas alleges, as the gravamen of its complaint, that Nebraska has taken more than its designated share of the virgin water supply by intercepting groundwater that is hydrologically connected to the flows of the Republican River and its tributaries. See Kan. Compl. paras. 5-9. Kansas's complaint rests on the understanding that stream flows consist of contributions from surface run-off and from groundwater discharge. Kansas essentially complains that the Republican River Basin's stream flows depend on groundwater contributions and that, if Nebraska intercepts those contributions through groundwater pumping and does not account for them as part of its Compact allocation, Nebraska will receive more than its allocated share of the virgin water supply. Kan. Br. in Support of Compl. 4-5, 8, 12-13.

Kansas's complaint is based on well-founded hydrological principles that this Court has previously recognized in adjudicating water-rights disputes. For example, the Court ruled in *Cappaert v. United States*, 426 U.S. 128 (1976), that the petitioners in that case had unlawfully depleted a federally reserved pool of surface water in Devil's Hole National Monument by pumping groundwater that supplied the pool. The Court observed that "[g]roundwater and surface water are physically interrelated as integral parts of the hydrologic cycle." *Id.* at 142 (quoting Charles E. Corker, *Groundwater Law, Management and Administration, National Water Commission Legal Study No. 6*, at xxiv (1971)). The Court specifically relied on scientific knowledge establishing that groundwater pumping can diminish surface pools and stream flows. See *id.* at 142-143.

Kansas's complaint, like this Court's decision in *Cappaert*, relies on hydrological principles that have long been common knowledge among water resource managers. See Thomas C. Winter et al., *Ground Water and Surface Water: A Single*

*Resource* (1998) (U.S. Geological Survey (USGS) Circular 1139) (copies lodged with the Court).<sup>7</sup> As the USGS has explained:

Streams interact with ground water in all types of landscapes. The interaction takes place in three basic ways: streams gain water from inflow of ground water through the streambed (gaining stream), they lose water to ground water by outflow through the streambed (losing stream), or they do both, gaining in some reaches and losing in other reaches. For ground water to discharge into a stream channel, the altitude of the water table in the vicinity of the stream must be higher than the altitude of the stream-water surface. Conversely, for surface water to seep to ground water, the altitude of the water table in the vicinity of the stream must be lower than the altitude of the stream-water surface.

*Id.* at 9 (parenthetical references to illustrations omitted). The USGS notes that “[g]round water contributes to streams in most physiographic and climatic settings.” *Id.* at 12. See *id.* at 13, Fig. B-2 (providing ten examples from different geographic regions of the United States); see also *id.* at 38-41 (describing interactions in riverine terrain); *id.* at 57-61 (describing irrigation effects, with special reference to Nebraska).<sup>8</sup> Numerous scientific and legal sources, including

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<sup>7</sup> The USGS’s views are especially significant, because Article IX of the Compact provides that the USGS “shall collaborate with the officials of the States charged with administration of this compact in the execution of the duty of such officials in the collection, correlation, and publication of water facts necessary for the proper administration of the compact.” Add. 8a.

<sup>8</sup> For simplicity of discussion, we assume that the streams within the Republican River Basin are “gaining” streams and that groundwater pumping could intercept groundwater discharge to streams. In doing so, we do not mean to preclude the possibility that the Republican River Basin may include “losing” streams and that groundwater pumping could

sources contemporaneous with and pre-dating the Republican River Compact, recognize those basic hydrological axioms. See, *e.g.*, *Snake Creek Mining & Tunnel Co. v. Midway Irrigation Co.*, 260 U.S. 596, 598 (1923); *Kansas v. Colorado*, 206 U.S. 46, 114-115 (1907).<sup>9</sup>

Indeed, Kansas relies on science that was not only well established at the time the Compact was approved, but was also specifically made known to the state commissioners who negotiated the Compact and calculated the virgin water supply. The minutes of the Compact negotiations record that, on January 27-28, 1941, the commissioners met with Harry P. Burleigh, of the United States Bureau of Agricultural Economics, who was preparing a study “to determine the extent and useability of the underground waters of the basin and the availability of lands which could be reclaimed thereby in tributary basin areas.” Add. 28a. The minutes reveal that

[u]pon inquiry, Mr. Burleigh advised the Commission that all of the underground waters of the basin above Scandia, Kansas, are included in the total water supplies of the basin, as reflected in measurements of stream flow at Scandia and other points in the basin, and that any underground developments must be considered as

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affect the virgin water supply by increasing the loss of stream flow into a groundwater aquifer.

<sup>9</sup> See also, *e.g.*, Robert J. Glennon & Thomas Maddock, III, *The Concept of Capture: The Hydrology and Law of Stream/Aquifer Interactions*, in *Proceedings of the 43d Annual Rocky Mountain Mineral Law Institute* 22-2 to 22-14 (1997); Charles E. Corker, *Groundwater Law, Management and Administration*, *National Water Commission Legal Study No. 6*, at xxiv, 58 (1971); Richard S. Harnsberger, *Nebraska Ground Water Problems*, 42 Neb. L. Rev. 721, 722-726 (1963); Harold E. Thomas, *The Conservation of Ground Water* 136-138 (1951); C.F. Tolman & Amy C. Stipp, *Analysis of Legal Concepts of Subflow and Percolating Waters*, 21 Or. L. Rev. 113, 115-125 (1942); Samuel C. Wiel, *Need of Unified Law for Surface and Underground Water*, 2 S. Cal. L. Rev. 358, 359-363 (1929).

reducing to that extent the amount of surface water available for use within the basin.

*Id.* at 29a. Thus, the commissioners were aware that the calculated stream flows included a groundwater discharge component and that groundwater pumping could deplete those stream flows.<sup>10</sup>

**B. The Compact Requires A State To Include Within Its Allocation Of The Virgin Water Supply Groundwater Consumption That Diminishes Basin Stream Flows**

Kansas contends that, because the Republican River Compact apportions the virgin water supply by allocating stream flows that include both surface runoff and groundwater discharge components, each State must include within its Compact allocation both direct diversions of the apportioned stream flows and also groundwater usage that diminishes those stream flows. That proposition is sound for three related reasons.

1. The text of the Compact indicates that a State's allocation of the virgin water supply includes groundwater consumption that reduces the Basin stream flows. The Compact defines the virgin water supply as the "water

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<sup>10</sup> The minutes also reveal that Mr. Burleigh had stated that "he was desirous of obtaining a statement from the Commission as to whether the amounts of underground waters he had determined would be feasibly possible of use, would, in the opinion of the Commission, exceed the allotment of water to each state which the Commission may have agreed upon." Add. 29a. Three days later, on behalf of the Commission, Commissioner Knapp of Kansas sent a letter to Mr. Burleigh stating that "the total estimated annual consumptive use of water is within the amount of the water supply available in the basin above Hardy" and that "the proposed allocations in each of the several states fall within the amounts which the Commission may see fit to allocate to each state." See Bureau of Agricultural Economics, Dep't of Agriculture, *Water Facilities Area Plan for Upper Republican River Basin in Nebraska, Kansas, and Colorado* 307 (June 1941) (reprinting the letter as Appendix VII of the "Burleigh Report").

supply within the Basin undepleted by the activities of man,” and it defines the Basin inclusively as “all the area in Colorado, Kansas, and Nebraska, which is naturally drained by the Republican River, and its tributaries, to its junction with the Smoky Hill River in Kansas.” Art. II (Add. 3a). Under those definitions, a State depletes the virgin water supply “through the activities of man” if it authorizes pumping of groundwater by its citizens that diminishes Basin stream flows. The State should therefore include such groundwater pumping as part of its Compact allocation.

Contrary to Nebraska’s assertions (Neb. Br. 8), the Compact does not need to apportion groundwater directly, or even make specific reference to groundwater consumption, in order to create enforceable restrictions on groundwater consumption. See *Nebraska v. Wyoming*, 507 U.S. 584, 592 (1993). The Compact places limits on each State’s consumption of the virgin water supply. If the Republican River Basin stream flows that comprise the virgin water supply consist in part of groundwater discharge, and a State allows its citizens to pump groundwater that reduces those stream flows, then the State must include that consumption as part of the State’s allocation. Otherwise, the State will receive more than its allocated share of the virgin water supply.

The Compact’s express statement of its “major purposes” bolsters that conclusion. Art. I (Add. 2a). Article I states that the Compact is intended “to provide for an equitable division of [the waters of the Republican River Basin].” *Ibid.* The States agreed on the Compact allocations on the understanding that the Basin’s undeveloped stream flows historically yielded a reliable quantity of water—the virgin water supply—that would be fairly shared among the States. If Congress and the compacting States sought an equitable division of the Basin waters, then they could not have intended that an upstream State would be entitled to augment its allocation by simply taking a portion of the virgin water supply before it reached the stream flow gauges. The

Compact division is not equitable if an upstream State can supplement its allocation at will by simply intercepting a component of the virgin water supply before it can be measured.

Article I also states that the Compact is intended “to remove all causes, present and future, which might lead to controversies” and “to promote interstate comity.” Add. 2a. It is improbable that the Compact negotiators—who were aware of the relationship between stream flow and groundwater discharge (see pages 18-19, *supra*)—would have considered the Compact an effective means for avoiding future controversies if the upstream States remained at liberty to circumvent the precisely drawn allocations through the simple expedient of intercepting groundwater contributions. Congress and the States viewed the Compact as providing a comprehensive apportionment of all of the Basin’s stream flows so that the federal government, the States, and individual water users could engage in orderly planning and development of irrigation works based on the knowledge of each State’s water supply. If an upstream State could increase its allocation, to the detriment of the downstream States, through groundwater pumping, downstream expectations and investments—including congressionally funded flood control and reclamation projects—could be placed at risk.<sup>11</sup>

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<sup>11</sup> The legislative history of Congress’s approval of the Compact supports that understanding. See, *e.g.*, S. Rep. No. 152, *supra*, at 2 (“The undertaking of irrigation projects in the past, and more so of those projects yet to be undertaken, depends on the soundness and the stability of the rights to the use of water in connection therewith.”); *S. 649 Hearing* 13 (Sen. Butler) (“[T]o bring about that stabilization [of the farms in the region], the compact must be approved, permitting a legal division of the waters of the Republican and its tributaries, so that improvements may be encouraged and made possible.”); *id.* at 33 (Neb. Compact Comm’r Wardner G. Scott) (“We, in Nebraska, are very anxious that this compact be ratified by the Congress, so that an orderly planning and development

2. The compacting States have confirmed through their practical construction of the Compact that, if a State authorizes groundwater pumping that measurably diminishes stream flow, those depletions should be charged against that State's allocation. The RRCA's formulas for computing the Basin's virgin water supply provide a clear expression of that understanding. As described above, the Compact authorizes the States to administer the Compact through the responsible officers in each State. See pages 8, 10, *supra*. The States formed the RRCA for that purpose in 1959, when water development had proceeded to a stage that required formal oversight of Compact compliance. The RRCA's First Annual Report, issued in 1961, included formulas for computing the virgin water supply. Add. 94a-102a. As Nebraska acknowledges (Neb. Br. 18-19), since the inception of the RRCA, those formulas have taken into account groundwater pumping "from the alluvium along the stream channels." See Add. 97a.

Nebraska suggests (Neb. Br. 18-19) that the RRCA's decision to include only alluvial groundwater (*viz.*, ground-

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and utilization of the waters of the basin can be had in the near future."); *id.* at 35 (M.O. Ryan, Executive Secretary, Republican Valley Conservation Association) ("[I]n the meantime, and before construction of projects can properly be undertaken which would draw upon water supplies originating in several States, it will be essential that a legal division of the waters of the streams be made for all time. \* \* \* By this action, you will simplify all post-war developments in that fine agricultural area, and spare the residents limitless litigation and trouble in the years to come."); *H.R. 4647 Hearings* 7 (Rep. Carlson) ("The territory that is drained by this river needs the use of this water and these States thought, by getting together and working out this compact, they could reach an agreement on the use of this water so that there would be no conflict as to the construction of the various reclamation projects with any other uses it might be put to."); 87 Cong. Rec. at 9610 (Sen. Norris) ("This agreement, if put into effect, would permit the residents of each of the States in question to go ahead, with notice as to just how much water may be taken from every one of the streams.").

water pumped from the alluvium in the valley floor) reflects the States' understanding that the Compact, as a matter of law, excludes consideration of groundwater pumping from non-alluvial sources that nevertheless affect stream flows in the Basin. That suggestion is unsound. The RRCA's First Annual Report demonstrates that the RRCA was aware that groundwater pumping from non-alluvial sources could deplete Republican River Basin stream flows. See Add. 87a-88a, 90a-91a. The RRCA decided to include only alluvial groundwater pumping in its virgin water supply formulas because the RRCA did not have sufficient data, at that time, to estimate the effects of non-alluvial groundwater pumping. See *ibid.*; see also Add. 97a-98a.<sup>12</sup>

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<sup>12</sup> The RRCA's First Annual Report explains that the RRCA appointed a Committee on Procedure and Computation of Annual Virgin Water Supply to develop formulas for computing the virgin water supply. See Add. 83a-84a. That Committee recognized in its first progress report that, as a general matter, groundwater use could deplete the virgin water supply. Add. 90a-91a. It nevertheless recommended that "only the wells in the valley floor of the main Republican River and of its tributaries be considered as depleting the water supply of the Republican River, for present use in the Virgin Flow Formula." *Ibid.* The Committee reasoned:

Apparently the determination of the effect of pumping by "table-land" wells on the flow of the streams in the Republican River Basin must await considerabl[y] more research and data regarding the character of the groundwater aquifer and the behavior of groundwater flow before even approximate information is available as to the monthly or annual effects on steam flow. \* \* \*

Add. 91a; see also Add. 93a ("Any accurate determination of the virgin water supply in the Republican River Basin is dependent upon a considerable improvement in obtaining data for diversions by stream pumps and by pumping of groundwater from wells."). The Committee ultimately determined that its formulas should take account of only groundwater pumping "from the alluvium along the stream channels," repeating verbatim its previous observation that the effects of groundwater pumping from other sources requires "more research and data." Add. 97a. See page 11, *supra*.

The RRCA plainly understood that the Compact's apportionment of the virgin water supply could place limitations on a State's consumption of hydraulically connected groundwater. Since 1961, the RRCA has included in its calculation of the virgin water supply alluvial groundwater pumping that depletes Basin stream flows. See Add. 108a (*Formulas*). The RRCA's failure to revise its formulas to include groundwater pumping from other sources does not reflect a retreat from the general principle that the RRCA recognized at its inception, nor does it reflect a consensus that non-alluvial groundwater pumping has no effect on stream flows. See Kan. Br. in Support of Compl. 8-9. Rather, the RRCA has retained the 1961 methodology because the RRCA can act only through the unanimous action of the state representatives, and Nebraska has steadfastly refused to agree to revise the formulas to take into account the effects of non-alluvial groundwater pumping. See *ibid.*

3. Finally, there is nothing novel in recognizing that an interstate compact that apportions stream flows can limit a compacting State's groundwater usage. This Court has twice faced that question. In *Kansas v. Colorado*, No. 105, Original, the Court adopted the Special Master's uncontested recommendation that the Court find that Colorado had violated the Arkansas River Compact, ch. 155, 63 Stat. 145, through excessive groundwater pumping. 514 U.S. 673 (1995). And in *Texas v. New Mexico*, No. 65, Original, the Court issued a series of rulings respecting the Pecos River Compact, ch. 184, 63 Stat. 159, which reflected the understanding that the Compact limited New Mexico's right to consume groundwater. See 446 U.S. 540 (1980); 462 U.S. 554 (1983); 482 U.S. 124 (1987). In each of those original actions, the Compact in question did not expressly apportion groundwater.

This Court's decision in *Kansas v. Colorado* is most directly on point. The Arkansas River Compact, like the Republican River Compact, does not explicitly address

groundwater. Rather, the relevant Compact provision, Article IV-D, recites that States may engage in future water resource development, provided that the waters of the Arkansas River “shall not be materially depleted in usable quantity or availability” for water users in the compacting States. See 63 Stat. 147. The Master recognized the hydrological relationship between stream flow and groundwater, see 1 Report of Special Master, No. 105, Original, at 37 (July 1994), and he concluded that the Arkansas River Compact is intended to prevent “material depletion caused by any increased consumptive use, including the construction of new wells or increased levels of pumping from precompact wells.” *Id.* at 108; see also 2 *id.* at 194. The Master accordingly recommended that the Court find Colorado liable for pumping groundwater that materially depleted the usable flow. *Id.* at 263. Although Colorado filed a number of exceptions to the Master’s recommendations, it did not challenge the Master’s conclusion that the Arkansas River Compact restricts groundwater consumption that materially depletes the stream flow. See 514 U.S. at 680-681. The Court expressly agreed with the Master’s conclusion that “new wells, the replacement of centrifugal with turbine pumps, and increased pumping from [pre-Compact] wells all come within [Article IV-D].” 514 U.S. at 691.

In *Texas v. New Mexico*, Texas asserted that New Mexico had violated Article III of the Pecos River Compact, which states that “New Mexico shall not deplete by man’s activities the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition.” 63 Stat. 161. See 462 U.S. at 559-560. Although the parties joined issue on the meaning of the “1947 condition,” see 446 U.S. at 541, and the proper means for measuring depletions, see 462 U.S. at 571-574, the parties did not question that New Mexico’s groundwater consumption could “deplete by man’s activities the flow of the Pecos River at

the New Mexico-Texas state line,” 63 Stat. 161; see 462 U.S. at 557 & n.2, 559, and the methodology that the Court approved for making that determination took into account groundwater consumption, see 467 U.S. 1238 (1984); 482 U.S. at 127-128.<sup>13</sup>

Nebraska suggests (Neb. Br. 10) that this Court’s decisions in *Kansas v. Colorado* and *Texas v. New Mexico* have little relevance because neither Colorado nor New Mexico challenged the various Masters’ implicit and explicit determinations that the Compacts at issue restricted groundwater consumption. Those States, however, apparently declined to challenge those determinations because the challenges would be of no avail: The Compacts at issue in those cases

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<sup>13</sup> The Court approved use of a corrected version of the “inflow-outflow methodology,” which relies on a water balance of inflows to and outflows from the Pecos River, to calculate Texas’s entitlement. 482 U.S. at 127; 462 U.S. at 571-574. That methodology includes consideration of groundwater discharge into the Pecos River and groundwater pumping that depletes the stream flow. See, e.g., 462 U.S. at 558-559 & n.5; Engineering Advisory Comm’n, Pecos River Compact Comm’n, *Manual of Inflow-Outflow Methods of Measuring Changes in Steam-Flow Depletion*, reprinted in S. Doc. No. 109, 81st Cong., 1st Sess. 149 (1949) (“Everything that happens in the basin between the index inflow gaging stations and the outflow station which changes the amount of water depletion occurring in the basin between those points is measured by the inflow-outflow method.”); *id.* at 159 (“change in the inflow-outflow relation can be used as a measure of additional depletion of groundwater”). The Masters’ reports in No. 65, Original, reveal that the parties recognized that the groundwater component of the stream flow was a central issue in the case. See, e.g., Report of Special Master on Obligation of New Mexico to Texas under the Pecos River Compact 44 (Sept. 7, 1979) (“the heart of this controversy is the pumping of ground water in New Mexico”); Report and Recommendations 6 (Sept. 10, 1982) (citing a 1942 report noting that the Pecos River receives water from “spring and other ground waters”); Report and Recommendations E-10 to E-15 (Jan. 16, 1984) (consideration of specific groundwater inflows); Report 35 (July 1986) (noting that “New Mexico has other means of meeting a delivery obligation than curtailment of pumpage”).

obviously do place limits groundwater consumption.<sup>14</sup> The same is true here. Nebraska has simply taken a position in this litigation that is inconsistent with the physical realities of stream-groundwater interactions.<sup>15</sup>

**C. Kansas Is Entitled to Relief Under The Compact If It Can Demonstrate That Nebraska's Consumption Of Groundwater Has Resulted In Nebraska's Exceeding Its Compact Allocation**

As the foregoing analysis establishes, Nebraska's basic legal challenge to Kansas's complaint is unsound. Nebraska's objection that the Republican River Compact does not apportion groundwater as such (Neb. Br. 6-10) is of no moment. The Compact *does* apportion the virgin water supply, and Kansas is entitled to seek legal relief if Nebraska has taken more than its allocated share of that supply, whether through direct diversion or through groundwater pumping that diminishes stream flows. Nebraska's objection

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<sup>14</sup> For example, in the case of the Arkansas River Compact, one commentator had noted, as early as 1951, that "the flow of the Arkansas River from Colorado into Kansas is modified substantially by groundwater development. Although the Arkansas River Compact of 1949 does not mention ground water, its effective operation depends upon an adequate knowledge of the ground-water hydrology of the watercourse in Colorado." Thomas, *supra*, at 156. Similarly, in the case of the Pecos River Compact, the apportionment methodology necessarily requires consideration of groundwater effects on stream flows. See note 13, *supra*.

<sup>15</sup> Nebraska's position is also inconsistent with the position that it has taken in *Nebraska v. Wyoming*, No. 108, Original. In that case, Nebraska has sued Wyoming, arguing, *inter alia*, that this Court's North Platte Decree, 325 U.S. 665 (1945), which apportions the flow of the North Platte River but makes no mention of groundwater consumption, nevertheless restricts Wyoming's groundwater usage. See 515 U.S. 1, 14 (1995). Nebraska has taken one view of stream-groundwater interactions when it is a downstream plaintiff, and a different view when it is an upstream defendant. Wyoming, for its part, has conceded that "groundwater pumping in Wyoming can and does in fact deplete surface water flows in the North Platte River." *Ibid.*

that the Court and the parties have made reference to the Compact as an agreement respecting surface water (Neb. Br. 11-15) is likewise immaterial. There is nothing inconsistent between Kansas's claim for relief and, for example, this Court's observation in *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 959 (1982), that the Republican River Compact is an "agreement among States regarding rights to surface water," because Kansas claims that Nebraska has depleted surface stream flows through excessive groundwater consumption. Nebraska's assertion (Neb. Br. 16-19) that the States could not have intended to apportion groundwater is also irrelevant, because Kansas's complaint does not depend on whether the Compact apportioned groundwater in situ.<sup>16</sup>

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<sup>16</sup> We note, in particular, that there is no merit to Nebraska's assertion (Neb. Br. 16) that the compacting States could not have intended to regulate groundwater consumption because the States, at the time of the Compact, had not yet subjected their citizens to integrated regulation of stream flows and groundwater consumption. The Compact negotiators expressly stated that their deliberations were "guided by [this Court's decision in *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92, 106 (1938)], establishing the rights of states to make an equitable division of the waters of an interstate stream, regardless of its effect upon the presumably vested interests in either of the signatory states." Add. 23a. See also *Nebraska v. Wyoming*, 515 U.S. at 22. Kansas and Colorado have each enacted legislation providing for integrated regulation. See Kan. Ann. Stat. § 82a-703 (1989); Colo. Rev. Stat. §§ 37-90-101 *et seq.* (West Supp. 1996). By contrast, commentators have noted that Nebraska has been slow to adopt an integrated management regime. See Glennon & Maddock, *supra*, at 22-19 to 22-21; Stephen D. Mossman, "Whiskey is for Drinkin' But Water is for Fightin' About": A First-Hand Account of Nebraska's Integrated Management of Ground and Surface Water Debate and the Passage of L.B. 108, 30 Creighton L. Rev. 67 (1996); Harnsberger, *supra*, at 741-744. Nebraska's resistance to adoption of integrated regulation within its borders should not excuse it from complying with an interstate compact premised on hydrological principles underlying such regulation—particularly where Nebraska has previously sued a neigh-

Although Kansas's complaint is properly founded on the legal theory that the Republican River Compact can restrict a compacting State's consumption of groundwater, Kansas will be entitled to relief only if it can establish the factual elements of its claim. In particular, Kansas bears the burden of showing that Nebraska has in fact diminished the virgin water supply through groundwater pumping. To make that showing, Kansas must demonstrate the hydrological connection between Basin stream flows and groundwater pumping, and Kansas must establish the net stream flow losses resulting from groundwater consumption. Those factual issues, as well as the other outstanding issues in this original action, should be addressed, in the first instance, by a Special Master.<sup>17</sup>

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boring State to impose those principles in another interstate apportionment. See *Nebraska v. Wyoming*, 515 U.S. at 14. See note 15, *supra*.

<sup>17</sup> We note that original actions involving interstate water disputes have frequently proceeded at a slow pace. See *Texas v. New Mexico*, No. 65, Original (motion to file complaint granted in 1975 (421 U.S. 927), decree entered in 1987 (482 U.S. 124)); *Kansas v. Colorado*, No. 105, Original (motion to file complaint granted in 1986 (475 U.S. 1079), remanded for trial on remedy in 1995 (514 U.S. at 694)); *Nebraska v. Wyoming*, No. 108, Original (motion to file petition granted in 1987 (479 U.S. 1051), motions to amend pleadings granted in part in 1995 (515 U.S. at 4)). The slow progress may be due, to some degree, to the scope and complexity of the cases. But inordinate delays have also resulted from the parties' failure to define precisely, at the outset of the litigation, the specific issues in controversy.

The pleadings can play an important role in identifying the issues. To ensure that the Court maintains control over the scope of the litigation, the Court should require that a party obtain leave of the Court before filing counterclaims. See *Nebraska v. Wyoming*, 515 U.S. at 8-9; see also 481 U.S. 1011 (1987) (granting Wyoming leave to file a counterclaim). The Court may, of course, direct the Master to make a recommendation whether proposed counterclaims present appropriate matters for the exercise of original jurisdiction. See *United States v. Alaska*, 445 U.S. 914 (1980). The Court may also direct the Master to recommend rulings on affirmative defenses that are amenable to disposition through traditional

**CONCLUSION**

The motion to dismiss should be denied.

Respectfully submitted.

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SEPTEMBER 1999

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pre-trial mechanisms, compare Fed. R. Civ. P. 12, 56, as a means of resolving the dispute or narrowing the issues for trial. See generally *Nebraska v. Wyoming*, 515 U.S. at 5-6; 507 U.S. 584 (1993); see also *United States v. Alaska*, 503 U.S. 569 (1992) (resolving dispute through summary judgment on a stipulated record).

The Master should insist that the parties confer at the outset to reach agreement on a statement of the precise issues that are in dispute. See, e.g., Report of the Special Master in *United States v. Alaska*, No. 84, Original, at 7 & App. A (1996) (describing the parties' submission of a "Joint Statement of Questions Presented and Contentions of the Parties"). That statement can then guide the course of the litigation (including the scope of discovery) and provide the basis for continuing negotiations aimed at resolving the controversy. The Court has repeatedly "counseled States engaged in litigation with one another before this Court that their dispute 'is one more likely to be wisely solved by co-operative study and by conference and mutual concession on the part of representatives of the States so vitally interested in it than by proceedings in any court, however constituted.'" *Texas v. New Mexico*, 462 U.S. at 575. The Master should accordingly be receptive to mechanisms, such as consensual mediation, that may aid the States in reaching a negotiated solution.

## ADDENDUM A

Act of May 26, 1943, ch. 104, 57 Stat. 86

### AN ACT

To grant the consent of Congress to a compact entered into by the States of Colorado, Kansas, and Nebraska relating to the waters of the Republican River Basin, to make provisions concerning the exercise of Federal jurisdiction as to those waters, to promote flood control in the Basin, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the consent of Congress is hereby given to the compact authorized by the Act entitled "An Act granting the consent of Congress to the States of Colorado, Kansas, and Nebraska to negotiate and enter into a compact for the division of the waters of the Republican River", approved August 4, 1942. (Public Law 696, Seventy-seventh Congress; 56 Stat. 736), signed by the commissioners for the States of Colorado, Kansas, and Nebraska at Lincoln, Nebraska, on December 31, 1942, and thereafter ratified by the Legislatures of the States of Colorado, Kansas, and Nebraska, which compact reads as follows:*

#### "REPUBLICAN RIVER COMPACT

"The States of Colorado, Kansas, and Nebraska, parties signatory to this compact (hereinafter referred to as Colorado, Kansas, and Nebraska, respectively, or individually as a State, or collectively as the States), having resolved to conclude a compact with respect to the waters of the Republican River Basin, and being duly authorized therefor by the Act of the Congress of the United States of America, approved August 4, 1942, (Public No. 696, 77th Congress, Chapter 545, 2nd Session) and pursuant to Acts of

their respective Legislatures have, through their respective Governors, appointed as their Commissioners:

M.C. Hinderlider, for Colorado

George S. Knapp, for Kansas

Wardner G. Scott, for Nebraska

who, after negotiations participated in by Glenn L. Parker, appointed by the President as the Representative of the United States of America, have agreed upon the following articles:

“Article I

“The major purposes of this compact are to provide for the most efficient use of the waters of the Republican River Basin (hereinafter referred to as the ‘Basin’) for multiple purposes; to provide for an equitable division of such waters; to remove all causes, present and future, which might lead to controversies; to promote interstate comity; to recognize that the most efficient utilization of the waters within the Basin is for beneficial consumptive use; and to promote joint action by the States and the United States in the efficient use of water and the control of destructive floods.

“The physical and other conditions peculiar to the Basin constitute the basis for this compact, and none of the States hereby, nor the Congress of the United States by its consent, concedes that this compact establishes any general principle or precedent with respect to any other interstate stream.

## “Article II

“The Basin is all the area in Colorado, Kansas, and Nebraska, which is naturally drained by the Republican River, and its tributaries, to its junction with the Smoky Hill River in Kansas. The main stem of the Republican River extends from the junction near Haigler, Nebraska, of its North Fork and the Arikaree River, to its junction with Smoky Hill River near Junction City, Kansas. Frenchman Creek (River) in Nebraska is a continuation of Frenchman Creek (River) in Colorado. Red Willow Creek in Colorado is not identical with the stream having the same name in Nebraska. A map of the Basin approved by the Commissioners is attached and made a part hereof.

“The term ‘Acre-foot’, as herein used, is the quantity of water required to cover an acre to the depth of one foot and is equivalent to forty-three thousand, five hundred sixty (43,560) cubic feet.

“The term ‘Virgin Water Supply’, as herein used, is defined to be the water supply within the Basin undepleted by the activities of man.

“The term ‘Beneficial Consumptive Use’ is herein defined to be that use by which the water supply of the Basin is consumed through the activities of man, and shall include water consumed by evaporation from any reservoir, canal, ditch, or irrigated area.

“Beneficial consumptive use is the basis and principle upon which the allocation of water hereinafter made are predicated.

## “Article III

“The specific allocations in acre-feet hereinafter made to each State are derived from the computed average annual virgin water supply originating in the following designated drainage basins, or parts thereof, in the amounts shown:

“North Fork of the Republican River drainage basin in Colorado, 44,700 acre-feet;

“Arikaree River drainage basin, 19,610 acre-feet;

“Buffalo Creek drainage basin, 7,890 acre-feet;

“Rock Creek drainage basin, 11,000 acre-feet;

“South Fork of the Republican River drainagebasin, 57,200 acre-feet;

“Frenchman Creek (River) drainage basin in Nebraska, 98,500 acre-feet;

“Blackwood Creek drainage basin 6,800 acre-feet;

“Driftwood Creek drainage 7,300 acre-feet;

“Red Willow Creek drainage basin in Nebraska, 21,900 acre-feet;

“Medicine Creek drainage basin, 50,800 acre-feet;

“Beaver Creek drainage basin, 16,500 acre-feet;

“Sappa Creek drainage basin, 21,400 acre-feet;

“Prairie Dog Creek drainage basin, 27,600 acre-feet;

“The North Fork of the Republican River in Nebraska and the main stem of the Republican River between the junction of the North Fork and Arikaree River and the lowest crossing of the river at the Nebraska-Kansas state line and the small tributaries thereof, 87,700 acre-feet.

“Should the future computed virgin water supply of any source vary more than ten (10) per cent from the virgin water supply as hereinabove set forth, the allocations hereinafter made from such source shall be increased or decreased in the relative proportion that the future computed virgin water supply of such source bears to the computed virgin water supply used herein.

## “Article IV

“There is hereby allocated for beneficial consumptive use in Colorado, annually, a total of fifty-four thousand, one hundred (54,100) acre-feet of water. This total is to be derived from the sources and in the amounts hereinafter specified and is subject to such quantities being physically available from those sources:

“North Fork of the Republican River drainage basin, 10,000 acre-feet;

“Arikaree River drainage basin, 15,400 acre-feet;

“South Fork of the Republican River drainage basin, 25,400 acre-feet;

“Beaver Creek drainage basin, 3,300 acre-feet; and

“In addition, for beneficial consumptive use in Colorado, annually, the entire water supply of the Frenchman Creek (River) drainage basin in Colorado and of the Red Willow Creek drainage basin in Colorado.

“There is hereby allocated for beneficial consumptive use in Kansas, annually, a total of one hundred ninety thousand, three hundred (190,300) acre-feet of water. This total is to be derived from the sources and in the amounts hereinafter specified and is subject to such quantities being physically available from those sources:

“Arikaree River drainage basin, 1,000 acre-feet;

“South Fork of the Republican River drainage basin, 23,000 acre-feet;

“Driftwood Creek drainage basin, 500 acre-feet;

“BeaverCreek drainage basin, 6,400 acre-feet;

“Sappa Creek drainage basin, 8,800 acre-feet;

“Prairie Dog Creek drainage basin, 12,600 acre-feet;

“From the main stem of the Republican River upstream from the lowest crossing of the river at the Nebraska-Kansas state line and from water supplies of upstream basins otherwise unallocated herein, 138,000 acre-feet;

provided, that Kansas shall have the right to divert all or any portion thereof at or near Guide Rock, Nebraska; and

“In addition there is hereby allocated for beneficial consumptive use in Kansas, annually, the entire water supply originating in the Basin downstream from the lowest crossing of the river at the Nebraska-Kansas state line.

“There is hereby allocated for beneficial consumptive use in Nebraska, annually, a total of two hundred thirty-four thousand, five hundred (234,500)acre-feet of water. This total is to be derived from the sources and in the amounts hereinafter specified and is subject to such quantities being physically available from those sources:

“North Fork of the Republican River drainage basin in Colorado, 11,000 acre-feet;

“Frenchman Creek (River) drainage basin in Nebraska, 52,800 acre-feet;

“Rock Creek drainage basin, 4,400 acre-feet;

“Arikaree River drainage basin, 3,300 acre-feet;

“Buffalo Creek drainage basin, 2,600 acre-feet;

“South Fork of the Republican River drainagebasin, 800 acre-feet;

“Driftwood Creek drainage basin, 1,200 acre-feet;

“Red Willow Creek drainage basin in Nebraska, 4,200 acre-feet;

“Medicine Creek drainage basin, 4,600 acre-feet;

“Beaver Creek drainage basin, 6,700 acre-feet;

“Sappa Creek drainage basin, 8,800 acre-feet;

“Prairie Dog Creek drainage basin, 2,100 acre-feet;

“From the North Fork of the Republican River in Nebraska, the main stem of the Republican River between the junction of the North Fork and Arikaree River and the lowest crossing of the river at the Nebraska-Kansas state line, from the small tributaries thereof, and from water supplies of up stream basins otherwise unallocated herein, 132,000 acre-feet.

“The use of the waters hereinabove allocated shall be subject to the laws of the State, for use in which the allocations are made.

“Article V

“The judgment and all provisions thereof in the case of Adelbert A. Weiland, as State Engineer of Colorado, et al. v. The Pioneer Irrigation Company, decided June 5, 1922, and reported in 259 U.S. 498, affecting the Pioneer Irrigation ditch or canal, are hereby recognized as binding upon the States, and Colorado, through its duly authorized officials, shall have the perpetual and exclusive right to control and regulate diversions of water at all times by said canal in conformity with said judgment.

“The water heretofore adjudicated to said Pioneer Canal by the District Court of Colorado, in the amount of fifty (50) cubic feet per second of time is included in and is a part of the total amounts of water hereinbefore allocated for beneficial consumptive use in Colorado and Nebraska.

“Article VI

“The right of any person, entity, or lower State to construct, or participate in the future construction and use of any storage reservoir or diversion works in an upper State for the purpose of regulating water herein allocated for beneficial consumptive use in such lower State, shall never be denied by an upper State; provided, that such right is subject to the rights of the upper State.

“Article VII

“Any person, entity, or lower State shall have the right to acquire necessary property rights in an upper State by purchase, or through the exercise of the power of eminent domain, for the construction, operation and maintenance of storage reservoirs, and of appurtenant works, canals and conduits, required for the enjoyment of the privileges

granted by Article VI; provided, however, that the grantees of such rights shall pay to the political subdivisions of the State in which such works are located, each and every year during which such rights are enjoyed for such purposes, a sum of money equivalent to the average annual amount of taxes assessed against the lands and improvements during the ten years preceding the use of such lands, in reimbursement for the loss of taxes to said political subdivisions of the State.

“Article VIII

“Should any facility be constructed in an upper State under the provisions of Article VI, such construction and the operation of such facility shall be subject to the laws of such upper State.

“Any repairs to or replacements of such facility shall also be made in accordance with the laws of such upper State.

“Article IX

“It shall be the duty of the three States to administer this compact through the official in each State who is now or may hereafter be charged with the duty of administering the public water supplies, and to collect and correlate through such officials the data necessary for the proper administration of the provisions of this compact. Such officials may, by unanimous action, adopt rules and regulations consistent with the provisions of this compact.

“The United States Geological Survey, or whatever federal agency may succeed to the functions and duties of that agency, in so far as this compact is concerned, shall collaborate with the officials of the States charged with the administration of this compact in the execution of the duty of such officials in the collection, correlation, and publication of water facts necessary for the proper administration of this compact.

## “Article X

“Nothing in this compact shall be deemed:

“(a) To impair or affect any rights, powers or jurisdiction of the United States, or those acting by or under its authority, in, over, and to the waters of the Basin; nor to impair or affect the capacity of the United States, or those acting by or under its authority, to acquire rights in and to the use of waters of the Basin;

“(b) To subject any property of the United States, its agencies or instrumentalities, to taxation by any State, or subdivision thereof, nor to create an obligation on the part of the United States, its agencies or instrumentalities, by reason of the acquisition, construction, or operation of any property or works of whatsoever kind, to make any payments to any State or political subdivision thereof, state agency, municipality, or entity whatsoever in reimbursement for the loss of taxes;

“(c) To subject any property of the United States, its agencies or instrumentalities, to the laws of any State to any extent other than the extent these laws would apply without regard to this compact.

## “Article XI

“This compact shall become operative when ratified by the Legislature of each of the States, and when consented to by the Congress of the United States by legislation providing, among other things, that:

“(a) Any beneficial consumptive uses by the United States, or those acting by or under its authority, within a State, of the waters allocated by this compact, shall be made within the allocations hereinabove made for use in that State and shall be taken into account in determining the extent of use within that State.

“(b) The United States, or those acting by or under its authority, in the exercise of rights or powers arising from

whatever jurisdiction the United States has in, over, and to the waters of the Basin shall recognize, to the extent consistent with the best utilization of the waters for multiple purposes, that beneficial consumptive use of the waters within the Basin is of paramount importance to the development of the Basin; and no exercise of such power or right thereby that would interfere with the full beneficial consumptive use of the waters within the Basin shall be made except upon a determination, giving due consideration to the objectives of this compact and after consultation with all interested federal agencies and the state officials charged with the administration of this compact, that such exercise is in the interest of the best utilization of such waters for multiple purposes.

“(c) The United States, or those acting by or under its authority, will recognize any established use, for domestic and irrigation purposes, of the waters allocated by this compact which may be impaired by the exercise of federal jurisdiction in, over, and to such waters; provided, that such use is being exercised beneficially, is valid under the laws of the appropriate State and in conformity with this compact at that time of the impairment thereof, and was validly initiated under state law prior to the initiation or authorization of the federal program or project which causes such impairment.

“IN WITNESS WHEREOF, the Commissioners have signed this compact in quadruplicate original, one of which shall be deposited in the archives of the Department of State of the United States of America and shall be deemed the authoritative original, and of which a duly certified copy shall be forwarded to the Governor of each of the State.

“Done in the City of Lincoln, in the State of Nebraska, on the 31st day of December, in the year of our Lord, one thousand nine hundred forty-two.

“M.C. HINDERLIDER

“Commissioner for Colorado

“GEORGE S. KNAPP

“Commissioner for Kansas

“WARDNER G. SCOTT

“Commissioner for Nebraska

“I have participated in the negotiations leading to this proposed compact and propose to report to the Congress of the United States favorably thereon.

“GLENN L. PARKER

“Representative of the United States”

Sec. 2(a) In order that the conditions stated in article XI of the compact hereby consented to shall be met and that the compact shall be and continue to be operative, the following provisions are enacted –

(1) any beneficial consumptive uses by the United States, or those acting by or under its authority, within a State, of the waters allocated by such compact, shall be made within the allocations made by such compact for use in that State and shall be taken into account in determining the extent of use within that State;

(2) the United States, or those acting by or under its authority, in the exercise of rights or powers arising from whatever jurisdiction the United States has in, over, and to the waters of the Basin shall recognize, to the extent consistent with the best utilization of the waters from multiple purposes, that beneficial consumptive use of the waters within the Basin is of paramount importance to the development of the Basin; and no exercise of such power or right thereby that would interfere with the full beneficial consumptive use of the waters within the Basin shall be made except upon a determination, giving due consideration to the objectives of such compact and after consultation with all interested

Federal agencies and the State officials charged with the administration of such compact, that such exercise is in the interest of the best utilization of such waters for multiple purposes.

(3) the United States, or those acting by or under its authority, will recognize any established use, for domestic and irrigation purposes, of the waters allocated by such compact which may be impaired by the exercise of Federal jurisdiction, in, over, and to such waters: *Provided*, That such use is being exercised beneficially, is valid under the laws of the appropriate State and in conformity with such compact at the time of the impairment thereof, and was validly initiated under State law prior to the initiation or authorization of the Federal program or project which causes such impairment.

(b) As used in this section –

(1) “beneficial consumptive uses” has the same meaning as when used in the compact consented to by Congress by this Act; and

(2) “Basin” refers to the Republican River Basin as shown on the map attached to and made a part of the original of such compact deposited in the archives of the Department of State.

Approved May 26, 1943.

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**ADDENDUM B**

**Minutes**

**of**

**The First Meeting of the Republican River Compact  
Commission**

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Present:

M.C. Hinderlider, Commissioner for Colorado

George S. Knapp, Commissioner for Kansas

A.C. Tilley, Commissioner for Nebraska

also

R.H. Willis, Chief, Bureau of Irrigation,  
Water Power and Drainage for the  
State of Nebraska, as adviser to  
the Commissioner for Nebraska

The Commission met in the office of the State Engineer of Colorado at 10 A.M., May 28, 1940, for the purpose of giving consideration to the preliminary report of the Bureau of Reclamation covering its investigations in the Republican River basin, which had been released for the confidential consideration of the Commission.

The members of the Commission proceeded to review and discuss this report, which consumed the balance of the day. Prior to recessing, the Commission agreed that it would be advisable to invite Mr. Debler of the Bureau of Reclamation and his assistant, Engineer C.T. Judah, to appear the following day to explain certain phases of the aforementioned report.

The Commission re-convened at 9 A.M., May 29th, in the office of the State Engineer of Colorado, at which time Mr. Debler and his assistant engineer appeared before it and explained in considerable detail the report of the Bureau, which Mr. Debler stated must be considered only a preliminary report.

It was the view of the Commission that an equitable allocation of the waters of the Republican River system for beneficial uses, and for the control of floods, may be made only after a complete study of the needs of the basin

Mr. Debler, therefore, was requested to advise the Commission concerning plans of the Bureau for completing in greater detail its present work and for correlation of such studies with those now in progress, or which have been made, by the Corps of U.S. Engineers. Mr. Debler advised the Commission that the progress of further studies by the Bureau would depend upon funds made available by the Congress for such purpose; that funds anticipated to be available would be used for the completion by December 31, 1941, of the studies and report on Buffalo and Medicine Creeks, and the classification of lands below McCook, Nebraska, and the irrigation phases of the Harlan County Reservoir.

Mr. Debler advised the Commission that the studies and report of the Wray Reservoir and the North Fork of the Republican had been completed.

The Commission is of the opinion that, to enable it to carry out its purpose, the program of the Reclamation Bureau should be enlarged to include investigations and reports on all possible projects for the control and use of the waters of the Republican River basin.

The Commission requested Engineer Judah to furnish it with a tabulation of all the reservoirs mentioned in the preliminary report of the Bureau, showing the maximum capacity of each of such reservoirs, the capacities allocated for flood control, irrigation and sedimentation, together with a preliminary estimate of the cost of constructing the dams at each of these sites; such information to also include the location of each of the dams by section, township and range. Mr. Judah agreed to furnish this information to each member of the Commission at an early date.

Since the Corps of Engineers has spent some time in making surveys and studies of the problem of flood control and other benefits in the Republican River basin, it was the view of the Commission that each commissioner should have a copy of any report which has been compiled by the Corps of U.S. Engineers which might be available for the use of the Commission. The Commission, therefore, directed a written request for any and all such reports to Col. C.L. Sturtevant, Division Engineer, Corps of Engineers, Kansas City.

Thereupon, the Commission adjourned, with the understanding that a date for another meeting of the Commission would be later arranged by mutual agreement.

/s/ M.C. HINDERLIDER  
Commissioner for Colo.

/s/ GEORGE S. KNAPP  
Commissioner for Kan.

/s/ A.C. TILLEY  
Commissioner for Nebr.

**Second Meeting of Republican River Compact  
Commission in the Office of the State Engineer of  
Colorado on December 6-7, 1940**

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Meeting convened at 10 A.M. December 6th.

Present:

M.C. Hinderlider, Commissioner for Colorado

George S. Knapp, Commissioner for Kansas

R.H. Willis, representing A.C. Tilley, Commissioner  
for Nebraska

During the morning session, the Commission, after a general review of basin-wide conditions, as shown by the report of the U.S. Army Engineers and the preliminary report of the U.S. Bureau of Reclamation, considered proposed bases upon which a compact might be predicated, these being:

1. A complete previously prepared plan of basin-wide development;
2. A plan which would provide for reservations of water on tributaries for possible future use;
3. A plan which would provide for the approval currently of proposed projects as they may be investigated and favorably reported upon by federal or other agencies, until the entire water supply is allocated.

While the data available to the Commission at this time is not sufficient upon which to make a definite determination of a basin-wide plan of development which might be equitable to three states, the Commission was of the opinion that preliminary information on projects in Nebraska and Kansas, including multiple-use projects on the lower reaches of streams in Colorado, together with records of stream flow throughout the basin, is sufficient to warrant the conclusion that there is reason to believe that the water supply is sufficient to meet the reasonable requirements and opportunities for development in each state.

The commissioner for Colorado stated that, while reasonably complete information concerning multiple-use projects in Nebraska and Kansas had been made available by the U.S. Engineers and Bureau of Reclamation, very little data has been assembled by these federal agencies concerning opportunity for development on the upper tributaries of the Republican River in Colorado, aside from that of the North Fork or Wray project, and that, unless the Commission could agree upon the general principle of the right of each state to the unrestricted use of waters originating in each state, present lack of data on Colorado's needs might preclude the consummation of a compact until after such information has been made available by the United States or other agencies. The commissioners for Kansas and Nebraska objected to such a formula pending more definite knowledge of the opportunities for development in the three states and adequacy of water supplies.

The three commissioners were generally of the opinion that it is desirable that a compact be prepared in time for the consideration of the incoming Legislatures of the three states, but it was agreed that this should not be the *controlling* factor.

Since the Commission had been previously advised by Mr. Debler of the U.S. Bureau of Reclamation that it is not the policy of his department to release reports on individual projects throughout the basin pending completion of the basin-wide surveys and studies and release of the final report, which it is estimated will require at least another year, at the request of the Commission Mr. Debler advised that his resident engineer, Mr. Judah, in charge of investigations in the Republican River basin, would be available to appear before the Commission and supply any current information which the Commission might deem of importance in its deliberations. By prior arrangement, Mr. Judah appeared at the afternoon session of the Commission and gave a tentative report of the present status of the investigations in Nebraska and Kansas, covering land areas and classifications; water supplies; tentative conclusions concerning consumptive uses of water; the location of the projects which have been investigated to date and those for which investigations have been completed; and a tentative program of future investigations. This information was given the Commission, with the understanding that it was more in the nature of a progress report covering investigations to date by the Bureau, and was not to be considered as being conclusive.

The Commission questioned Mr. Judah at considerable length for the purpose of acquiring as complete a picture as possible of the results of the Bureau's surveys and studies of projects in the Republican River basin to date, and a knowledge of the extent of and time required for the completion of the Bureau's studies.

December 7th

The Commission convened at 9:30 A.M. and proceeded to review the information furnished by Engineer Judah on the previous day, together with available records of stream flow, relative location of arable lands in Kansas and Nebraska, as disclosed by the Bureau's investigation, and possible relative needs and opportunities in each state for water utilization. These preliminary studies consumed the remainder of the day.

It is the opinion of the Commission that further time will be required in which to make individual studies of available data and, therefore, the Commission adjourned 4:30 P.M., with the tentative understanding that it would convene again at an early date at a place and time to be mutually agreed upon.

/s/ M.C. HINDERLIDER  
Commissioner for Colorado

/s/ GEORGE S. KNAPP  
Commissioner for Kansas

/s/ R.H. WILLIS  
Representing A.C. TILLEY,  
Com. for Neb.

**Minutes of the Third Meeting of the  
Republican River Compact Commission at  
Lincoln, Nebraska**

December 30, 1940 to January 2, 1941

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The Commission met at 11 o'clock, December 30, 1940 in the Governor's Hearing Room at the State House.

Present:

M.C. Hinderlider, Commissioner for Colorado

George S. Knapp, Commissioner for Kansas

R.H. Willis, Representing A.C. Tilley, Commissioner  
for Nebraska

F.B. Shaffer, Assistant Engineer, Nebraska

State Planning Board, Technician

Prior to this meeting of the Commission, the three members thereof had compiled data on stream flow and land areas in the Republican River basin above Concordia, Kansas, from all available federal and state records, and had made certain analyses of these data.

Commissioner Hinderlider proposed the following principles which might well be considered as controlling in reaching an agreement with respect to a division of the waters of the basin between the three states:

1. That all allocations of water be based upon beneficial consumptive use, which was concurred in by the other members;

2. Uses of water in the past should constitute a prior and superior right and requirements of water for the future to meet domestic, livestock and municipal needs should have preferred status over the use for any other purpose and should be so recognized by the terms of the compact. The members of the Compact Commission were in accord on this point and were of the opinion that due to the relatively small demands for such preferential needs, such requirements need not be considered in making specific allocations of water for other uses in the respective states;

3. That present available consumptive uses of water in the basin be recognized in arriving at final allocations of water between the states, to the end that present uses would be fully protected, on which point the members of the Commission were in agreement;

4. That next consideration be given to needs for water to supplement existing uses within the basin, upon which point the members of the Commission were in agreement;

5. That any compact should recognize the decisions of the federal court in the case of Adelbert A. Weiland, as State Engineer for the State of Colorado, et al, vs. The Pioneer Irrigation Company, 259 U.S. 498, as binding, not only upon the citizens and the States of Colorado and Nebraska, but likewise upon the citizens and State of Kansas. It was agreed, however, that opinions of the Attorney General of the three states should be obtained on this point.

6. That in view of the fact that a reclamation project on the North Fork of the Republican near Wray, Colorado, for the irrigation of lands in Colorado and Nebraska, has been approved for construction under the provisions of the Case-Wheeler Act, and that the report of the U.S. Bureau of Reclamation has recommended that a compact or understanding between the three states, satisfactory to the Secretary of the Interior, should be had prior to actual construction of this project, the Commission agreed that the water required for this project would come well within tentative allocations of water proposed to be incorporated in a compact. Commissioner Knapp was of the opinion that such recognition at this time might establish a dangerous precedent;

That the Commission's deliberations be guided by the decision of the Supreme Court of the United States in the case of *The La Plata River and Cherry Creek Ditch Co. v. Hinderlider*, 304 U.S. 92, establishing the right of states to make an equitable division of the waters of an interstate stream, regardless of its effect upon presumably vested interests in either of the signatory states. On this proposal, the Commission was in agreement.

The Commission proceeded to a consideration of such data and to a revised record of stream flow of the Republican River and its tributaries, as computed and compiled by Engineer Shaffer, which work consumed the greater part of the day.

For the purpose of expediting its analyses of water supply, present uses and future demands upon the same, Commissioner Hinderlider presented for consideration a tentative analysis which he had made and previously furnished to the other two commissioners. The commissioners proceeded to study this analysis in the light of the

official records of water supply and the recent reports of the United States Engineers and the U.S. Bureau of Reclamation, and the values of reconstructed stream flow prepared by Engineer Shaffer.

About 4 o'clock Commissioner Tilley met with the Commission for the remainder of the day, it having been impossible for him to meet previously due to prior commitments.

Commissioner Tilley reviewed the findings of the Corps of U.S. Engineers with respect to the 17 projects investigated in the Republican River basin by the Corps, both for flood control and for multiple purposes, including reclamation. Mr. Tilley was strongly of the opinion that all of the needs thruout the basin should be considered as a whole or as a unit, and that the difference between estimated benefits and costs for any project should be spread over other projects that the studies by the department had shown would not be economically justified by themselves alone.

The members of the Commission were of the same opinion, and it was agreed that the views of the Commission should be transmitted to the Corps of Engineers, with the request that a re-study of the projects thruout the basin should be predicated upon this principle.

Recess was taken at 5:30 P.M.

December 31, 1940

The Commission reconvened at 9:30 A.M. and continued its study of the analysis of water supply and required uses from the preceding day, which consumed the entire day.

Recess was taken at 5:00 P.M.

January 1, 1941

The Commission resumed at 10:00 A.M. its studies of the preceding day and continued until 3:00 P.M.

Recess was taken then until 9:00 A.M. January 2nd.

January 2, 1941

The Commission resumed at 9:00 A.M. its analysis of water supplies and demands thereon. This preliminary study was concluded at 3 P.M., at which time computations with respect to tentative allocations of water had been completed, with the understanding, however, that such computations were subject to possible changes.

The Commission was of the opinion that adjustments with respect to factual data are necessary to final allocation of the waters of the basin, and the drafting of a compact for the consideration of the water users, legal advisers of the members of the Commissioners, and the Governors of the respective states. The final revision of figures did not appear possible until further studies have been made. Accordingly, the Commission adjourned following a courtesy call upon Governor Cochran, with the understanding that the members would give immediate attention to the further study of available data, and would arrange to meet again at Topeka, Kansas, at an early date, tentatively fixed as January 13, 1941.

/s/ M.C. HINDERLIDER  
Commissioner for Colorado

/s/ GEORGE S. KNAPP  
Commissioner for Kansas

/s/ A.C. Tilley by R.H. WILLIS  
Commissioner for Nebraska

**Minutes of the Fourth Meeting  
of the Republican River Compact Commission at  
Topeka, Kansas, on January 27-28, 1941**

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Present:

|                    |  |
|--------------------|--|
| M. C. Hinderlider, | Commissioner for Colorado  |
| George S. Knapp,   | Commissioner for Kansas  |
| Wardner G. Scott,  | Commissioner for Nebraska  |
| R. H. Willis,      | Chief, Bureau of Irrigation, Water<br>Power and Drainage, Dept. of Public<br>Works, Nebraska |
| John Riddell,      | Ass't Att'y Gen'l of Nebraska  |

Meeting convened at 10 A. M. in the hearing room of the State Board of Agriculture in the Capitol Building. The following gentlemen appeared before the Commission to express their views concerning needs for water developments and water conservation in the Republican River basin in Nebraska and Kansas.

Don P. Postlethwaithe, attorney for St. Francis, Kansas, who talked on the needs of the valley in that section of the state;

M. O. Ryan, representing a number of organizations in the Republican River valley in Nebraska and Kansas, who spoke in behalf of the needs of the residents in the area represented by him;

Dr. E. P. Ahrens of Scandia, Kansas, who spoke in behalf of needs for flood control and water for reclamation and other benefits in the lower basin of the Republican River.

All these gentlemen expressed the hope that a compact may be consummated and ratified by the Legislatures of the three states at an early date, and assured the Commission of their full support in the efforts of the Commission to attain this objective. They expressed the view that any conclusions reached by the Commission, they felt confident, would be approved by the water users throughout the basin.

Mr. Harry P. Burleigh and Associate *Robt. M.* Barkley, representing the U.S. Bureau of Agricultural Economics, with offices at Amarillo Texas appeared before the Commission and outlined the scope of the work which the Bureau has been carrying on throughout the Republican River basin to determine the extent and useability of the underground waters of the basin and the availability of lands which could be reclaimed thereby in tributary basin areas. Mr. Burleigh advised the Commission that it is now contemplated the complete report of the Bureau will be available for distribution to the commissioners not later than three weeks from date.

Mr. Burleigh explained at considerable length the nature of these investigations and the basis of determinations of water supply and available land areas, limits of pumping lift, limits of cost per acre used in his determinations and many other factors. He also presented the Commission with a tabular statement showing estimated amounts of underground water available in the various basins in the Republican River basin in the three states and amounts of land to which such water supplies could be applied within the economic limits he had assumed.

Mr. Burleigh advised the Commission that, in view of the fact that numerous applications had been made to his department by land owners thruout the basin, he was desirous of obtaining a statement from the Commission as to whether the amounts of underground waters he had determined would be feasibly possible of use, would, in the opinion of the Commission, exceed the allotments of water to each state which the Commission may have agreed upon; that his department did not want to recommend developments of underground water supplies in excess of the allocations of water to each state.

He advised the Commission also that his department is advising with the U.S. Bureau of Reclamation with a view of reaching an understanding concerning the scope of future developments within the basin, both of surface and underground waters, which would not be overlapping in effect, to the end that a rational program of development by both federal agencies might be carried out in the future without the danger of over-development by either agency to the detriment of developments by the other agency. Upon inquiry, Mr. Burleigh advised the Commission that all of the underground waters of the basin above Scandia, Kansas, are included in the total water supplies of the basin, as reflected in measurements of stream flow at Scandia and other points in the basin, and that any underground water developments must be considered as reducing to that extent the amount of surface water available for use within the basin.

At the afternoon session, Engineer Ware of the U. S. Engineers Office at Kansas City appeared, at the invitation of the Commission, and discussed present progress of the studies and reports on flood control and multiple use projects in the Republican River basin. Mr. Ware advised the Commission that, in conformity with former understanding of the

Commission, his department is reviewing its former reports concerning the economic feasibility of the various reservoir projects which have been investigated thruout the basin, to determine if the excess benefits over costs resulting from the building of the Harlan County Reservoir, could be so distributed over other storage reservoirs thruout the basin as to show the benefits from constructing such reservoirs would exceed the estimated costs thereof. The Commission was advised, however, that, even though the results of such studies were favorable to the development of a number of storage reservoirs for flood control or multiple-purpose projects, there is no certainty that his department would recommend such program of developments in lieu of the single development of the Harlan County reservoir, which is designed for a major purpose.

Mr. Ware also advised the Commission that his department expects to give consideration to data furnished by the Bureau of Reclamation concerning any reservoirs or projects which are being investigated by the Bureau, but that such information will have to be available to the Corps before June 1, 1941, since the supplemental report of the Corps of Engineers cannot be delayed later than that date.

January 28, 1941

Meeting of the Commission convened in the Jayhawk Hotel at 10 A. M., with all members present.

The Commission resumed its studies on water supply and tentative allocations, which had been temporarily suspended at the last meeting in Lincoln. This work consumed the entire day. After making some adjustments of previous figures, and reconstructing present stream flow in the light of all present available knowledge concerning past uses of

water within the basin, the members of the Commission were in substantial agreement, both as to principles and as to allocations of water to the three states.

In this connection, the Commission gave consideration to a preliminary draft for an interstate compact, which had been prepared by Commissioner Hinderlinder and presented to the Commission on January 27th. The members of the Commission were in general agreement concerning the terms of the tentative draft, but reserved any final conclusions until the tentative draft could receive further study and approval of the Attorneys General of the three states.

The Commission adjourned its deliberations at 5 P. M., with the understanding that the Commission would convene again at Denver, Colorado, on the 10th of February.

/s/ M. C. HINDERLIDER  
Commissioner for Colorado

/s/ GEORGE S. KNAPP  
Commissioner for Kansas

/s/ WARDNER G. SCOTT  
Commissioner for Nebraska

**Minutes of the Fifth Meeting of the Republican  
River Compact Commission at Denver, Colorado,  
February 10-12, 1941**

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Present:

|                    |   |
|--------------------|---|
| M. C. Hinderlider, | Commissioner for Colorado   |
| George S. Knapp,   | Commissioner for Kansas   |
| Wardner G. Scott,  | Commissioner for Nebraska   |
| R. H. Willis,      | Chief, Bureau of Irrigation,<br>Water Power and Drainage,<br>Dept. of Public Works, Neb-<br>raska |

The Commission met at 9:30 A. M. February 10th.

The first item of business was the correction and approval of the minutes of the third and fourth meetings of the Commission.

The Commission then proceeded to a reconsideration of reconstructed stream flow and tentative allocations of water for consumptive uses throughout the Basin, and the preparation of a revised schedule of allocations of water.

The Commission then proceeded to the consideration of a final draft for a compact, which consumed the balance of the day.

Recess was taken at 5 P. M., with the understanding that the Commission would not reconvene until 1:30 P. M. February 11th, to permit Commissioner Hinderlider to attend a conference of water users at Ft. Lupton.

February 11

The Commission convened at 1:30 P. M. and resumed consideration of a final draft for a compact, which work consumed the balance of the day.

Adjournment was taken at 5:30 P. M.

February 12

The Commission convened at 9:30 A. M. and spent the entire forenoon in completing the final draft for a compact for the consideration of the legal advisers of the Commissioners

Commissioner Scott and Mr. Willis were compelled to leave soon after noon, and it was agreed that Commissioners Hinderlider and Knapp would prepare a new tabulation of reconstructed stream flow and allocations of water, in accordance with the values set up in the draft for a compact, with the exception of the values relating to acreages and uses of water on the South Fork of the Republican River. This latter matter was to be held in abeyance until Commissioners Knapp and Hinderlider could make a trip over the lower reaches of the Republican River Basin in Colorado and western Kansas, to obtain further information concerning irrigated areas. It was agreed that this field investigation would be made on February 17th and 18th.

The final draft for a compact was prepared at this meeting and each commissioner agreed to refer the same at once to the Governors of their respective states for early consideration, and to submit the same to representatives of the water users.

There being no further business, the Commission adjourned at 12:30 P. M., with the understanding that it would convene again on February 21st at Lincoln, Nebraska.

/s/ M. C. HINDERLIDER  
Commissioner for Colorado

/s/ GEORGE S. KNAPP  
Commissioner for Kansas

/s/ WARDNER G. SCOTT  
Commissioner for Nebraska

**Minutes of the Sixth Meeting of the Republican  
River Compact Commission at Lincoln, Nebra [sic],  
February 21-22, 1941**

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Present:

|                                      |  |
|--------------------------------------|--|
| M. C. Hinderlider,                   | Commissioner for Colorado  |
| George S. Knapp,                     | Commissioner for Kansas  |
| Wardner G. Scott,                    | Commissioner for Nebraska  |
| R. H. Willis,                        | Chief, Bureau of Irrigation, Water<br>Power and Drainage, Dept. of<br>Public Works, Nebraska |
| Gail L. Ireland,                     | Attorney General of Colorado   |
| Warden Noe and<br>Eldon Wallingford, | Attorneys representing the<br>Attorney General of Kansas                                     |
| John Riddell,                        | Assistant Attorney General of<br>Nebraska  |

The Commission proceeded at once to the consideration of suggested changes in the wording of the last draft for a compact as they were presented by the three commissioners and their legal advisers, which continued throughout the day.

Adjournment was taken at 5 P. M.

February 22

The Commission resumed its discussions at 9:30 A. M., covering proposed changes in the last draft for a compact, which continued throughout the entire day. Substantial agreement was reached on amendments to Articles I to V, inclusive, and Articles IX to XIII, inclusive.

Since it was apparent that further consideration for other articles of the last draft would require further extended study and it being necessary for Commissioner Hinderlider to attend a meeting of the Rio Grande Compact Commission at Santa Fe on February 24th, the Commission adjourned this meeting with the understanding that it would convene again on March 3, 1941, at Lincoln or possibly Denver.

/s/ M. C. HINDERLIDER  
Commissioner for Colorado

/s/ GEORGE S. KNAPP  
Commissioner for Kansas

/s/ WARDNER G. SCOTT  
Commissioner for Nebraska

**Minutes of the Seventh Meeting of the Republican  
River Compact**

**Commission at Lincoln, Nebraska, March 3-7, 1941**

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The Commission met in the office of the State Engineer of Nebraska at 10 A. M., March 3rd:

Present:

|                    |  |
|--------------------|--|
| M. C. Hinderlider, | Commissioner for Colorado  |
| George S. Knapp,   | Commissioner for Kansas  |
| Wardner G. Scott,  | Commissioner for Nebraska  |
| R. H. Willis,      | Chief, Bureau of Irrigation, Water<br>Power and Drainage, Dept. of<br>Public Works, Nebraska |
| Gail L. Ireland,   | Attorney General of Colorado   |
| Eldon Wallingford, | Attorney representing the<br>Attorney General of Kansas                                      |
| John Riddell,      | Assistant Attorney General of<br>Nebraska  |

The Commission proceeded to consider Article by Article the last tentative draft for a compact in the light of federal and state law, the method of allocations used by the Commission and the re-phrasing of certain sections of the compact, all of which consumed the entire day.

March 4

The Commission resumed its deliberations from the preceding day, which continued throughout the day.

March 5

The Commission consumed the entire day with a continuation of its deliberations initiated on March 3rd.

March 6

The entire day was confined to a continuation of the work of the previous days of this session and in making certain minor revisions of former allocations of water.

March 7

The Commission resumed its labors at 10 A. M. in the form of a further tentative draft for a compact insofar as the same could be completed at this session, since it appeared necessary that further opportunity for discussion past uses of water in the South Fork of the Republican River was necessary to a final conclusion of the compact.

The Commission adjourned with the understanding that Commissioners Hinderlider and Knapp would meet at Denver on March 17th with Senator Ragan and Attorney Don Postlethwaithe, to consider the aforementioned matters relative to the waters of the Republican River, and that the Commission thereafter would meet in Denver, March 18th for the purposes of completing, if possible, the final draft and the signing of a compact.

/s/ M. C. HINDERLIDER  
Commissioner for Colorado

/s/ GEORGE S. KNAPP  
Commissioner for Kansas

/s/ WARDNER G. SCOTT  
Commissioner for Nebraska

**Minutes of the Eighth, and Last, Meeting of the  
Republican River Compact Commission at  
Denver, Colorado, on March 18-19, 1941**

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Prior to the meeting of the Compact Commission at 9:30 A.M. March 18th, Commissioner Hinderlider and Knapp met in the office of the State Engineer of Colorado with Senator Ragan of Colorado, and Attorney Don. P. Postlethwaithe, representing water users in the St. Francis Valley in Kansas, to consider the question of past and present uses of water in the basin of the South Fork of the Republican River in Colorado and Kansas, at which time Mr. Postlethwaithe presented maps and other records of appropriations of water out of the South Fork of the Republican River in Kansas, on file in the County Court House at St. Francis, as evidence of past uses of water in that area. Commissioner Hinderlider presented tabulations of decrees covering appropriations of water out of the South Fork of the Republican River in Colorado.

At this conference Attorney General Ireland of Colorado, and Assistant Attorney General John Riddell of Nebraska, were present a portion of the time. This entire discussion related to the question of an equitable division of the water supply of the South Fork of the Republican between the states of Colorado and Kansas, and lasted the entire day of March 17th.

March 18

The Commission met in the office of the State Engineer of Colorado at 9:30 A. M.

Present:

|                    |   |
|--------------------|---|
| M. C. Hinderlider, | Commissioner for Colorado                 |
| George S. Knapp,   | Commissioner for Kansas                   |
| Wardner G. Scott,  | Commissioner for Nebraska                 |
| Gail L. Ireland,   | Attorney General of Colorado              |
| John Riddell,      | Assistant Attorney General of<br>Nebraska |

The Commission proceeded to a further consideration of previous tentative allocations of water out of the South Fork of the Republican River, concerning which the Commission was not in agreement at its last meeting in Lincoln, Nebraska.

These discussions, together with a review of former tentative allocations of water throughout the basin, consumed the entire day. Senator Ragan was present for a limited time both in the morning and in the afternoon.

A final agreement on allocations of water throughout the basin was reached at 4:30 P. M.

The Commission then called upon Governor Carr, following which adjournment was taken at 5:00 P. M., subject to convening on the morning or March 19th.

March 19

The Commission convened at 9:30 A. M. and proceeded to prepare the final typed draft of the Compact in quadruplicate original, which four original copies were signed by the Commission at 4:30 P. M., March 19, 1941.

Each commissioner received one original which is to be conveyed to the Governor of his state with his written recommendation that the Compact, if approved by his Governor, be transmitted promptly to the Legislature of his respective state with his recommendations for favorable action thereon.

Commissioners Knapp and Scott authorized and requested Commissioner Hinderlider to transmit to Governor Carr the first original draft of the compact, with the request that he in turn transmit the same to the proper federal department at Washington, pursuant to the provisions of the compact.

/s/ M. C. HINDERLIDER  
Commissioner for Colorado

/s/ GEORGE S. KNAPP  
Commissioner for Kansas

/s/ WARDNER G. SCOTT  
Commissioner for Nebraska

**Minutes of the Ninth Meeting of the Republican  
River Compact Commission  
at Denver, Colorado, on December 2, 1942.**

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Present:

|                    |                                     |
|--------------------|-------------------------------------|
| M. C. Hinderlider, | Commissioner for Colorado           |
| Geo. S. Knapp,     | Commissioner for Kansas             |
| Wardner G. Scott,  | Commissioner for Nebraska           |
| G. L. Parker,      | Representative of the United States |

The Republican River Compact Commission met in room 243 of the State Capitol Building, December 2, 1942. At 11:30 a.m. Mr. M. C. Hinderlider called the meeting to order and made an opening statement reviewing the history of the matter since the draft of a compact was signed at Denver on March 19, 1941 by the Commissioners of the three states. He pointed out that thereafter the Compact was ratified by the Legislatures of the three states, that it was submitted to the Congress and in due time approved, and that the Act of Congress was later vetoed by the President of the United States; that subsequently the Congress passed a Bill giving its consent to the states of Colorado, Kansas and Nebraska to negotiate a new Compact upon the condition that a person, to be appointed by the President of the United States, should participate with the states as the representative of the United States. In conformity with that authority he said that the President had appointed Mr.

Glenn L. Parker, Chief Hydraulic Engineer, U. S. Geological Survey, as the Representative of the United States.

Following Mr. Hinderlider's statement, Mr. Knapp proposed that the three state Commissioners concur in a request that Mr. Parker be the presiding officer during these negotiations. The proposal received unanimous approval of the three states and Mr. Parker assumed the position of Chairman of the Commission. Mr. Parker then made the proposal that Mr. Knapp be asked to act as secretary which he consented to do.

Mr. Parker then said:

"I had rather expected Mr. Hinderlider to tell you about the informal meetings of the commission that were held here during the time that the National Reclamation Association had its annual meeting in Denver, I believe October 14-16. The Commission did not organize then, but discussed in general terms what might be appropriate. Inasmuch as the states had already considered the Compact, and the Legislatures had ratified the original Compact, the three state representatives thought that the first step would be for the Federal representative to arrange for a redraft of the Compact in language that would cover the interest of the Federal government, inasmuch as the Compact had presumably been vetoed because the Federal interests were not protected by the original Compact. Accordingly with the help of Mr. Howard R. Stinson, attorney to the Bureau of Reclamation, who has followed the events leading up to our present meeting very closely, a new draft of the Compact was prepared and submitted first to the Federal agencies involved. Those Federal agencies were the Department of Agriculture, Bureau of

the Budget, Federal Power Commission, Department of Interior, and the War Department.”

“The redraft of the Compact was transmitted to each of those agencies by a letter dated November 4th.”

“The redraft was not submitted to state representatives then because it was thought that we could get in quickly from the Federal representatives any changes that might be desired to protect Federal interests and revamp the draft, if necessary, before submitting to state representatives with the end in view of causing as little confusion as possible by having to consider several editions. That procedure did not work out well because it was very difficult to get clearance from the Federal agencies. Prompt action was taken by Ernest H. Weicking of the Department of Agriculture.”

“On November 19, the Compact was transmitted to the state Commissioners by letter in which it was indicated that clearance had been received from the Department of Agriculture, Federal Power Commission, and Department of the Interior, except for minor changes in language with no important issues involved.”

“The statement in that letter that the Federal Power Commission had given clearance, was based on a telephone conversation between me and Mr. Leland Olds, Chairman of the Federal Power Commission, approximately November 17th, during which he assured me the Federal Power Commission had cleared the redraft and that a letter would be received by me in a few days to that effect. It was not until 4:30 p.m. on the afternoon of November 30th, that I received a letter from the Federal Power Commission, which suggested that the

language relating to “beneficial consumptive use” as a paramount use be eliminated from the Compact.”

Mr. Parker:

Before we go farther it might be desirable to ask each state representative and for the Federal representative to indicate what persons have been chosen to advise them. Mr. Hinderlider will you please lead off?

Mr. Hinderlider:

Mr. Gail L. Ireland, Attorney General of Colorado, is the official legal advisor of the Commissioner for Colorado. Mr. Clifford H. Stone, Director of the Colorado Water Conservation Board, will be one of my legal advisers. Mr. Jenn Breitenstein, who is also a legal advisor to the Colorado Water Conservation Board, will be considered on the legal staff of the Commissioner for Colorado. Mr. Charles Patterson, the Chief Engineer of the Colorado Water Conservation Board, will be with us.

Mr. Knapp:

Mr. Eldon Wallingford, Assistant Attorney General, is legal advisor for Kansas.

Mr. Scott:

Mr. John Riddell, Assistant Attorney General of Nebraska, is my advisor.

Mr. Parker:

Assistant Secretary of the Interior, Oscar Chapman, was to have been the representative of the Department of the Interior. At the last moment, Secretary Chapman found it impossible to come because he had to go to Ottawa, Canada to represent the Interior Department on some matters. I expect a telegram today designating Howard R. Stinson, Assistant Chief Counsel, U. S. Bureau of Reclamation as the representative of the Department of Interior. He has with him here today Mr. E. B. Debler of the Bureau of Reclamation.

Mr. Homer H. Wells of the Bureau of Agriculture, in Denver, is designated as advisor from the Department of Agriculture. With him is Mr. Tom Steele.

Col. Lewis A. Pick is the representative of the War Department.

Mr. Parker:

One point I would like to clear up. Should we try to carry on parliamentary procedure, or proceed less formally? What is the pleasure of the Commission?

Mr. Knapp:

It is my own feeling that in general discussions might be somewhat informal, but that probably when we get down to considering the revision of the Compact, line by line, or section by section, the record should show whether each of the three Commissioners agree to proposed changes.

Mr. Parker:

I take it that in making a recommendation for a change we should have an expression of opinion by the Commissioner of each state. Is such procedure acceptable?

Mr. Hinderlinder:

It is to Colorado.

Mr. Scott:

It is to Nebraska.

Mr. Knapp:

I might add this: A compact is, in effect, an agreement to which each of the several parties must consent so that procedure doesn't involve so much determining what the majority wishes, as to determine whether each state accepts the proposals made. Any change must of course be acceptable to all three states.

Mr. Parker:

Does any one of the state representatives wish to suggest how we should proceed from here on?

Mr. Hinderlinder:

I would suggest that we take the original draft and go over it article by article, paragraph by paragraph.

The Commission the proceeded to consideration of all changes in the language of the original Compact proposed by the new draft which Mr. Parker sent to the three

Commissioners with his letter of November 19. As the new draft the Commission took the following action:

Preliminary Section:

In line 17, after the word “who” The Commission agreed to the proposed addition of the underlined words “after negotiations participated in by Glenn L. Parker, appointed by the President as the representative of the United States of America.” No other changes to the Preliminary Section were proposed.

Article I:

As the last paragraph of Article I, the Commission agreed to strike out the original clause to which the Federal Power Commission objected, and accept, in lieu thereof, the underlined language in lines 8, 9, 10, and 11:

“The use of the waters of the Republican River and tributaries thereof with the Basin, as hereinabove defined, for “Beneficial Consumptive Use”, as hereinbelow defined, shall constitute paramount use and any other use shall be subordinate thereto.”

There was considerable discussion of this matter. It centered around the fact that the Federal Power Commission had, in a letter to the Committee on Reclamation and Irrigation of the House of Representatives, dated October 18, 1941, (copy attached) stated its objection to the declaration that the Republican River and the tributaries thereof were not navigable, and had recommended that the paragraph be deleted and the above language substituted therefor. Mr. Parker reported to the Compact Commission that on November 30, he had received another letter (copy also attached) in which the Commission now asked that this

language, being the language hitherto proposed by them, should be eliminated from the Compact. After long discussion the Compact Commissioners decided to retain the language as set forth above.

Article II:

In line 16, page 2, the word “natural” was eliminated.

In line 20, after the word “right”, the words “of any person or entity” were added.

The same line and same page, the words “natural waters” were stricken and “water supply” substituted therefor.

In lines 20, 21, and 22, the words “by the citizens, agencies, associations and corporations of the signatory states” were stricken out.

Line 22, page 2, the word “following” was eliminated.

Article III:

Line 2, page 3, after the word “allocated” the words “to Colorado for use” were stricken out and the words “for beneficial consumptive use in Colorado” were substituted therefor.

Line 11, page 3, after the word “allocated”, the word “to” was stricken out and the words “for beneficial consumptive use in” were substituted therefor.

In the same line after the word “Colorado”, the words “for use” were stricken out.

Line 12, page 3, the word “Creek” was substituted for the word “River”, and the word “(River)” inserted after the word “Creek”.

In line 14, page 3, “to” was stricken out and the words “for beneficial consumptive use in” added.

Same line, same page, the words “for use” were stricken out.

Line 2, page 4, after the words “acre feet” the Commission inserted “including water supplies of upstream basins otherwise unallocated herein”.

In line 5, page 4, the word “to” was stricken, and “for beneficial consumptive use in” substituted therefor.

In line 6, page 4, the words “for use” were eliminated.

Line 7, page 4, after “the”, “lowest crossing of the river at the” was added.

In line 8, page 4, the word “to” was stricken out, and “for beneficial consumptive use in” added.

Line 8, page 4, after the word “Nebraska”, “for use” was eliminated.

Line 15, page 4, the word “River” was stricken out, the word “Creek” inserted, and the word “(River)” added after “Creek”.

Lines 2 and 3, page 5, the words “Colorado-Nebraska state line” were eliminated, and “junction of the North Fork and Arikaree River” added; and after the word “and”, “the lowest crossing of the river at” was added.

Line 5, page 5, after the words “acre feet”, “including water supplies of upstream basins otherwise unallocated herein” was added.

Line 7, page 5, “to” was stricken out and “for use in” added.

Article IV:

In line 22, page 5, “River” was stricken out and “Creek” inserted in lieu thereof. The word “River”, in parenthesis, was then added after “Creek”. Also, the words “in Nebraska” were inserted after “basin”.

Line 25, page 5, The words “in Nebraska” were inserted after “basin”.

Lines 6 and 7, page 6. The words “Colorado-Nebraska state line” were stricken out, “junction of the North Fork and Arickaree inserted in lieu thereof and “the lowest crossing of the river at” inserted after the word “and”.

Article V:

Line 20 and 21, page 6. The words “and the people of each said states” were eliminated.

Line 1, page 7, the word “decrees” was eliminated.

Line 4, page 7, the Commission eliminated the words “to the state of” and inserted in lieu thereof, “for beneficial consumptive use in”.

Article VI:

The Commission eliminated all of line 7, page 7, and “corporation, shall have” of line 8, beginning the sentence with the word “The”.

Line 8, page 7. After the word “right”, the words “of any person, entity or lower signatory state” were added.

Line 10, page 7, after the word “upper”, “signatory” was inserted.

Line 11, page. After the word “allocated”, “to” was stricken out, and “beneficial consumptive use in” was added in lieu thereof; also after the word “state”, “shall never be denied by an upper signatory state” was inserted.

Lines 12, 13 and 14, the words “its citizens, agencies, associations and corporations, to control, regulate and use the waters herein allocated to it.” was eliminated.

December 3, 1942

The Commission resumed its deliberations from the preceding day.

Article VII:

Line 16, page 7, the capital letter “A” was stricken out and “Any person, entity, or” inserted in lieu thereof.

In lines 16 and 17, the words “its citizens, agencies, associations and corporations,” were stricken. Also in line 17 after the word “acquire”, the words “necessary property rights” were inserted.

Line 19, page 7, the words “such easements and rights of way” were stricken out.

Line 23, page 7. The words “governmental agencies” were stricken out, and in lieu thereof, “political subdivisions of the state” were inserted.

Line 24, page 7. The words “of way” were stricken out.

Line 25, page 7, the word “occupied” was changed to “enjoyed”.

The same change was made in line 2, page 8.

Line 4, page 8, the words” governmental agencies” were stricken out and “political subdivisions of the state” inserted instead.

Note:

At this point, according to the transcript, Judge Stone said “In the interest of time and to avoid repetition, could we not refer in the appropriate place to upper state and lower state instead of signatory states or state?” In the draft of the transcript which the Secretary received from Mr. Parker on December 11, this was edited by striking out “instead of” and inserting “as”. This, probably in the unrevised form, was approved by the Compact Commissioners, the record shows. In a second draft of the transcript, received from Mr. Parker on December 21, which he states was reviewed and edited by Mr. Stinson, the statement reads, “In the interest of time and to avoid repetition could we not refer in the appropriate place to upper state and lower state as signatory states or state?”

In the revised draft of the Compact which Mr. Parker sent the Commissioners on December 4, it is noted that in all instances the word "signatory", where it occurred in earlier drafts of the Compact, was eliminated.

Article VIII:

This Article remains unchanged.

Article IX:

At the end of the original Article IX, the following was added:

"Such officials may, by unanimous action, adopt rules and regulations consistent with the provisions of this compact.

The United States Geological Survey, or whatever federal agency may succeed to the functions and duties of that agency, insofar as this compact is concerned, shall collaborate with the officials of the states charged with the administration of this compact in the execution of the duty of the latter in the collection, correlation, and publication of water facts necessary for the proper administration of the compact, and may perform such other services related to the compact as may be hereafter mutually agreed upon with the states."

Note:

At this point Mr. Parker read the following from a letter he received from General Robins of the Army Engineers.

“Dear Mr. Parker:

“Further reference is made to your letter of November 4, 1942, enclosing a new draft of Republican River Compact for review by this office, and to the Departmental reply thereto dated November 10, 1942, in which it was stated that this review would be undertaken immediately and that you would be further informed on this subject at the earliest practicable date.

“After careful consideration of the new draft of the Compact, I am pleased to state that this office sees no objection to its contents insofar as the Federal interests committed to the War Department are concerned. The only change which this office would wish to suggest is the insertion, on page 8, Article IX, line 18, following the word “Reclamation,” of the following wording:

“the Chief of Engineers, United States Army.”

“Colonel Lewis A. Pick, the Division Engineer, Missouri River Division, Omaha, Nebraska, will represent this office at the proposed meeting of the Compact Commission in Denver, Colorado, about December 1, 1942. It will be appreciated if you will inform this office promptly of the time and place of this meeting so that Colonel Pick may be properly advised.”

Article X:

Lines 2 and 3, page 9, the words “Republican River” were stricken out.

Line 4, page 9. The words “nor the United States by its consent,” was added to the original draft of the Compact.

Article XI:

All, after the first sentence in the first paragraph of the original Article XI, was stricken out.

Article XII:

A new article, numbered XII, was added to the Compact, of which the first part reads:

“(a) Nothing in this compact shall be deemed:

- (i) To impair or affect any rights, powers or jurisdiction of the United States, in over and to the waters of the Basin nor its capacity to acquire rights in and to the use of waters of said Basin;
- (ii) To subject any property of the United States, its agencies or instrumentalities, to taxation by any state, or subdivision thereof, nor to create an obligation on the part of the United States, its agencies or instrumentalities, by reason of the acquisition, construction or operation of any property or works of whatsoever kind, to make any payments to any state or political subdivision thereof, state agency, municipality or entity whatsoever in reimbursement for the loss of taxes;

- (iii) To subject any property of the United States, its agencies or instrumentalities, to the laws of any state to any extent other than the extent these laws would apply without regard to the compact.
- (b) The United States, by consenting to the compact, agrees that:
- (i) Any beneficial consumptive use of such waters by the United States, its agencies or instrumentalities, shall be subject to the allocations hereinabove made among the states,;
  - (ii) For their best utilization for multiple purposes, none of the waters allocated by this compact are required by, nor essential to, the United States in the exercise of any right or power concerning such waters arising out of its jurisdiction as to interstate commerce, and any future exercise of such right or power shall be only pursuant to statutory authority relating specifically to such waters;
  - (iii) In any future exercise of any right or power arising out of the jurisdiction or authority of the United States over the waters allocated by this compact, it will respect as property any right to the beneficial consumptive use of such water which is not or shall be hereafter established under the laws of the appropriate state and in conformity with this compact, and which is impaired by such exercise.”

The last part of the original XI, beginning with the words “IN WITNESS WHEREOF”, becomes the closing part of the new Article XII, as compared with the original Compact.

The meeting adjourned at 2 pm to meet again at Lincoln, Nebraska on December 29, 1942.

/s/ M. C. HINDERLIDER  
Commissioner for Colorado

/s/ GEO. S. KNAPP  
Commissioner for Kansas

/s/ WARDNER G. SCOTT  
Commissioner for Nebraska

/s/ GLENN L. PARKER  
Representative of the United States

FEDERAL POWER COMMISSION

Washington

October 18, 1941

Hon. Compton I. White,  
Chairman, Committee on Reclamation and Irrigation,  
House of Representatives,  
Washington, D.C.

My dear Mr. White:

There is now pending before your Committee H.R. 4647, 77th Congress, 1st Session, "A Bill granting the consent of Congress to a Compact to be entered into by the States of Colorado, Kansas and Nebraska with respect to the use of the waters of the Republican River Basin."

This Commission has given careful consideration to the proposal, and it is its view that if provision is made for subsequent amendment or the compact it would appear desirable to provide therein for the appointment of a representative to serve on behalf of the United States. Such a representative should be appointed by the President and the President should be left free to select as he may see fit.

The Commission objects in the strongest possible terms to the first part of the last paragraph of Article I of the Compact, stating that "The Republican River and tributaries thereof within the Basin . . . are not navigable . . ."

Legislative declaration of non-navigability, in general, is unwise inasmuch as it is difficult, if not impossible, without extensive studies and investigations kept current, to foresee all the potentialities of such streams. Weight is accorded such declaration by the Courts in view of the power of legislative inquiry and judgment, and a legislative declaration that a stream is non-navigable may, in fact, seriously hamper and prejudice an administrative investigation and determination of navigability of the same or a related stream by a Federal agency at a later date.

The purpose of the objectionable paragraph is simply to declare the uses of the water of a consumptive nature as constituting "paramount uses". Such a declaration is not objectionable to the Federal Power Commission, and may be accomplished without reference to the navigability or non-navigability of the Republican River and its tributaries. The Commission recommends that the paragraph be deleted and the following language substituted therefor:

"The use of the waters of the Republican River and tributaries thereof within the Basin, as hereinabove defined, for "Beneficial Consumptive Use," as hereinbelow defined, shall constitute paramount use and any other use shall be subservient thereto."

On September 11, 1941, this Commission reported to the Director of the Bureau of the Budget at his request upon the bill and upon certain amendments submitted to the Bureau by the Secretary of the Interior. The Commission's report included substantially the material contained in this report to your Committee.

Very truly yours,

/s/ LELAND OLDS  
CHAIRMAN

62a

COMMISSIONERS

Address all Communication  
To The Commission

Copy

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Leland Olds, Chairman  
Basil Manly, Vice Chairman  
Claude L. Draper  
John W. Scott  
Clyde L. Seavey

Leon M. Fuquay,  
Secretary

FEDERAL POWER COMMISSION

WASHINGTON

Republican River Compact

November 30, 1942

Mr. G. L. Parker,  
Chief Hydraulic Engineer  
Geological Survey,  
Department of the Interior  
Washington, D. C.

Dear Mr. Parker:

The draft of a proposed form of Republican River Compact, submitted with your letter of November 4, 1942, and which is to be presented by you for the consideration of the Compact Commission at a meeting to be held in Denver, Colorado in December, has been reviewed and informally considered by the Commission.

It is noted that the proposed draft would constitute “beneficial consumptive use” as the paramount use. It is felt that this language should be eliminated from the compact.

It is suggested that the definition of “beneficial consumptive use” is rather broad and might lead to considerable difficulty in interpretation of the compact if it should be approved in its present form.

Moreover, it is suggested that there should be included in the compact finally presented to Congress for ratification language which would definitely recognize that the rights and jurisdiction of the United States are not to be impaired or affected by such compact. This could be expressed in substantially the language heretofore used in other compacts. In any compact to be presented to Congress, it should clearly appear and be definitely stated that nothing in such compact is to be construed or deemed to subject any property of the United States, its agencies or instrumentalities, to taxation by any State or subdivision thereof. Furthermore, it should be made clear that the United States assumes no obligation to make any payment to any State by reason of the compact or any operation thereunder.

Without the final language, to be agreed upon by representatives of the interested States, before us, the Commission cannot take a more definite position in the matter. Following tentative agreement among the States, however, we will be in a position to offer any further suggestions which may seem necessary.

Sincerely yours,

LELAND OLDS

Chairman.

**Minutes of the Tenth Meeting of the Republican  
River Compact Commission at Lincoln, Nebraska -  
December 29, 1942 to January 1, 1943.**

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Present:

|                    |  |
|--------------------|--|
| M. C. Hinderlider, | Commissioner for Colorado              |
| Geo. S. Knapp,     | Commissioner for Kansas                |
| Wardner G. Scott,  | Commissioner for Nebraska              |
| G. L. Parker,      | Representative of the United<br>States |

The Commission met in the State Capitol Building.

After some preliminary remarks by the Chairman, he asked that the minutes of the Denver meeting be read. During and following the reading of the minutes, there was a general discussion of several matters contained therein, after which the minutes were approved subject to the following clarifications, corrections, changes, or additions:

(1) On Page 5, of the minutes, in the quotation concerning a substitute clause to be included in Article I, the word "subordinate" is used whereas the original suggestion of the Federal Power Commission in its letter of October 18, 1941, to the Chairman of the House Committee on Reclamation and Irrigation used the word "subservient." Prior to the meeting of December 2 and 3, a representative

of the Federal Power Commission had suggested a substitution of "subordinate" for "subservient".

(2) Concerning the use of the word "signatory", referred to in the note on Page 9, of the minutes, the action of the commission was to eliminate the word "signatory" wherever it appeared in earlier drafts of the compact. Provision for such elimination was made by inserting after the word "Nebraska" in the first line of the compact, "parties signatory to this compact, (hereafter referred to as Colorado, Kansas, and Nebraska, respectively, or individually as a State, or collectively as the States)."

(3) As to the suggestion made by General Robbins and included in his letter as quoted in the minutes, the suggestion was discussed at length. During such discussion the representative of the War Department indicated concurrence with a proposal by the Compact Commission that "the Commissioner of the Bureau of Reclamation" be stricken from Line 18, Page 8, of the draft under consideration; then, in that circumstance the War Department would be willing to drop the suggestion made in General Robbins' letter of November 21, 1942. Thereupon the Commission took definite action in the matter and revised Article IX, to read as indicated on Page 9, of the minutes.

(4) On Page 10, under Article XII, the introductory statement was revised to read: "A new Article, numbered XII, was added to the Compact, which reads:".

(5) The minutes of the meeting of December 2 and 3, are hereby amplified to show that the quoted language under (b) (ii) was finally agreed upon by a 4-way telephone hookup between the State Commissioners, at their respective places

of business, Mr. Parker, Judge Stone, and Mr. Stinson at Denver, on December 4, 1942.

(6) The minutes of the meeting of December 2 and 3 were further modified or corrected by striking the 2-line paragraph on Page 12 of the minutes which refers to the "Witness" clause of the compact.

At this point Judge Stone said that due to the experience encountered with respect to the Colorado River Compact, he thought that the Commissioners, before adjourning, should take some action with respect to the binding and preservation and official repository of official records of the Commission. He pointed out that questions of interpretation of the Colorado River Compact have arisen, and that in some instances it was impossible to determine what was intended by the commission in using certain language because the accumulations of the minutes were loosely bound, some have disappeared, and all of the states are unable to find their copies of the minutes. After some discussion it was agreed by the Commission that an authenticated copy of the minutes of the eight meetings of the Compact Commission, resulting in a compact which failed approval by the United States, together with the minutes of the meeting of the present Compact Commission, held in Denver, December 2 and 3, 1942, as well as the minutes of all subsequent meetings of the Compact Commission, be securely bound with a copy of the Compact; and deposited in the archives of the Department of State of the United States; and that there be included with such minutes, a copy of the Act Congress of the United States authorizing the making of a compact (Public No. 696, 77th Congress), authenticated copies of the Acts of the Legislatures of the three signatory States, ratifying any compact which may be negotiated and an authenticated copy of the Act of Congress approving such

compact. The carrying out of the above procedure was to be contingent upon the final negotiation of a Compact and its ratification and approval.

Mr. Parker then introduced those present besides the Commission and their legal advisors, as follows:

Mr. E. C. Gwillim, representative of the Department of Agriculture.

Mr. C. E. Houston, associate of Mr. Gwillim's.

Dean F. M. Dawson, Dean of the School of Engineering, University of Iowa, representing the National Resources Planning Board.

Mr. Dan Jones of the Nebraska Bureau of Irrigation, Water Power and Drainage in the State Engineer's office, Lincoln.

Mr. W. E. Dannifer, a resident of the Republican River Valley in Kansas.

Col. Lewis A. Pick, Division Engineer, U. S. Engineer Office.

Mr. E. B. Debler, U. S. Bureau of Reclamation.

The legal advisors of the Commissioners were: For Colorado, Mr. Gail L. Ireland, Attorney General and Mr. Clifford H. Stone, Director of the Colorado Water Conservation Board; for Kansas, Mr. Elden Wallingford, Assistant Attorney General; for Nebraska, Mr. John Riddell, Assistant Attorney General, and for the Representative of the United States, Mr. Howard R. Stinson, Assistant Chief Counsel, U. S. Bureau of Reclamation.

Following the noon recess, Mr. Parker discussed the results of his conferences with Federal agencies in

Washington on the Denver draft of the Compact. He read to the Commission a letter which he received a little after 5 o'clock on Saturday, December 26 by messenger from the Federal Power Commission, and discussed with them the draft of a proposed compact prepared by the Federal Power Commission and referred to in the letter.

A copy of both the letter and the draft of the proposed compact are attached hereto and made a part of the minutes.

There was a general discussion of the letter and the Federal Power Commission's proposed draft, after which Mr. Parker asked the Compact Commissioners whether the proposal would be acceptable to them. Before replying, the Compact Commissioners and their legal advisers recessed to another room for a conference.

During this conference the proposed compact draft was carefully considered by the three states, and at the conclusion it was agreed that Judge Stone, speaking for the three states, should advise Mr. Parker of the conclusions reached. Briefly stated, it was concluded that the revised draft, proposed by the Federal Power Commission, was not acceptable; that in the draft offered all reference to "beneficial consumptive use" had been eliminated, whereas the basis of allocation of water in the Compact heretofore drafted, was beneficial consumptive use; that to eliminate that provision was to eliminate the basis of allocation and the definition of what constitutes beneficial consumptive use; and that in the absence of such the Compact might not be ratified by all of the states.

Following Judge Stone's statement, Mr. Parker then asked each of the Commissioners whether they were in

agreement with the statement made and each replied in the affirmative.

Chairman Parker then asked Colonel Pick to discuss the War Department's view concerning Article XII(b) of the Denver draft. In his remarks Colonel Pick referred to a letter written by General Robins to Mr. Parker dated December 22nd. Colonel Pick pointed out that whereas General Robins had written Mr. Parker on December 17th indicating that the Denver draft would be satisfactory with a change altering Article XII (b) to read as follows:

“(b) The intent of this Compact is to provide for the most efficient use for multiple purposes, of the waters allocated hereunder, without impairing the authority of the United States in the exercise of any of its rights or powers in and over such waters”,

the War Department, as indicated in a letter of December 22nd to Mr. Parker, now considers it advisable to completely eliminate Article XII (b). Copies of General Robins' letters of December 17th and 22nd are attached.

There followed a general discussion of this matter in which not only the Commissioners but others present participated. There was, however, no action taken on the matter.

Since a definite conclusion was apparently not being reached, Mr. Parker asked whether that would not be a proper time for Mr. Stinson to present some suggestions which he had prepared. Briefly stated, Mr. Stinson said that he was going to outline two specific proposals for the purpose of discussion, but that they did not have any finality

about them as far as the Interior Department was concerned. He said that when the proposals were worked on in Washington, people in the Interior Department were considering the basis of objections of other federal agencies, and had the belief that the fundamental basis of objections to the draft of the Compact arrived at at the Denver meeting was that it might be construed as an attempt to withdraw or deny whatever federal jurisdiction there was over the waters of the Republican River Basin, based on federal authority as to interstate commerce.

The Interior Department, he said, recognizes that there should be arrived at some basis for adjusting or correlating conflicting views. There were, he said, two features of the Compact to be considered on the basis of possible objections:

- (1) Article XII (b) (ii)
- (2) Article I — the paramountcy clause.

Mr. Stinson stated that he took no fixed position. He did have some general proposals for discussion, but before discussing them he wanted to restate the general principles the Interior Department people believed should be recognized. They were:

- “(1) Rather than attempting to make the United States party to the Compact, the proper way to commit the United States is through terms of consenting legislation.
- (2) That stability for and paramountcy of beneficial consumptive use rights should be accomplished without encroachment on the right to exercise the underlying Federal jurisdiction.”

With these general principles in mind, he set the proposals out as follows:

PROPOSAL NO. 1

- (1) To redefine “beneficial consumptive use” as follows:  
“The term ‘Beneficial Consumptive Use’ is herein defined to be that use by which the water supply of a drainage basin is consumed through the activities of man, and shall include water consumed by evaporation from reservoirs, canals, ditches, and irrigation areas, but is exclusive of uses for the production of hydro-electric power and uses stemming from the Federal power to regulate interstate commerce.”
- (2) To reverse the order of Articles XI and XII and to drop subsection (b) of the new Article XI.
- (3) To omit the paramountcy clause.
- (4) To carry in the consenting legislation a section as follows:

“Sec. 2. To assist the states in attaining the objectives of the compact, the following provisions are enacted to govern the United States, and those acting by and under its authority; with respect to the waters allocated by the compact:

“(a) Any beneficial consumptive use as defined in said compact by the United States, or those acting by or under its authority, within a compacting state shall be made within the allocation made for use in that state and shall be taken into account in determining the extent of use within that state.

“(b) Whether acting pursuant to general or specific statutory authority heretofore or hereafter enacted, the United States, or those acting by or under its authority, shall not exercise any right or power stemming from Federal jurisdiction as to interstate commerce which shall interfere with any beneficial consumptive use of the waters of the Basin except upon a determination that the exercise of such right or power is in the interest of the best utilization of such waters, within or without the Basin.

“(c) The United States, or those acting by or under its authority, will respect as a property right any right to the beneficial consumptive use, as defined in said compact, of the waters allocated by this compact that may be damaged by the exercise of Federal jurisdiction in or over such waters: *Provided*, That such right is valid under the laws of the appropriate state and in conformity with this compact at the time of the damage thereto and was validly initiated under state law prior to the initiation or authorization of the Federal program or project which results in such damage.”

#### PROPOSAL NO. 2

(1) To redefine “beneficial consumptive use” as follows: “The term ‘Beneficial Consumptive Use’ is herein defined to be that use by which the water supply of a drainage basin is consumed through the activities of man, and shall include water consumed by evaporation from reservoirs, canals, ditches, and irrigated areas, but is exclusive of uses for the production of hydro-electric power and uses stemming from the Federal power to regulate interstate commerce.” (2) To reverse the order of Articles XI and XII; to drop sub-section (b) of the new Article XI; and to re-write the new Article XII as follows:

“XII. This compact shall be operative (a) when ratified by the legislatures of each of the states, and (b) when consented to by the Congress of the United States providing, among other things, that:

“(i) Any beneficial consumptive uses by the United States, or those acting by or under its authority, within a state of the waters allocated by this compact shall be made within the allocations hereinabove for that state and shall be taken into account in determining the extent of use within that state.

“(ii) The United States, or those acting by or under its authority, shall not exercise any right or power stemming from Federal jurisdiction as to interstate commerce which shall interfere with any beneficial consumptive use of the waters of the Basin except upon a determination that the exercise of such right or power is in the interest of the best utilization of such waters, within or without the Basin.

“(iii) The United States, or those acting by or under its authority will respect as a property right any right to the beneficial consumptive use of the waters allocated by this compact which may be damaged by the exercise of Federal jurisdiction in or over such waters; Provided, that such right is valid under the laws of the appropriate state and in conformity with this compact at the time of the damage thereto and was validly initiated under state law prior to the initiation or authorization of the Federal program or project which results in such damage.”

Also in the new Article XII, where the term “United States” or “United States, its agencies or instrumentalities” is used, substitute “the United States or those acting by or under its authority.”

(3) To omit the paramountcy clause.

(4) To carry a section in the consenting legislation as follows: “Sec. 2. To assist the states in attaining the objectives of the compact, the following provisions are enacted to govern the United States, and those acting by or under its authority, with respect to the waters allocated by the compact:

“(a) Any beneficial consumptive use as defined in said compact by the United States, or those acting by or under its authority, within a compacting state shall be made within the allocation made for use in that state and shall be taken into account in determining the extent of use within that state.

“(b) Whether acting pursuant to general or specific statutory authority heretofore or hereafter enacted, the United States, or those acting by or under its authority, shall not exercise any right or power stemming from Federal jurisdiction as to interstate commerce which shall interfere with any beneficial consumptive use of the waters of the Basin except upon a determination that the exercise of such right or power is in the interest of the best utilization of such waters, within or without the Basin.

“(c) The United States, or those acting by or under its authority, will respect as a property right any right to the beneficial consumptive use, as defined in said compact, of the waters allocated by this compact that may be damaged by the exercise of Federal jurisdiction in or over such waters: *Provided*, That such right is valid under the laws of the appropriate state and in conformity with this compact at the time of the damage thereto and was validly initiated under state law prior to the

initiation or authorization of the Federal program or project which results in such damage.

Mr. Stinson stated that the difference between the two proposals was that in No. 2 the compact would become effective by its terms only if Congress in its consenting legislation carried certain provisions. That is to say, not just any consent would be effective.

In each proposal the stability of beneficial consumptive use rights would rest on these two things:

(a) The requirement that every Federal agency give express consideration to the best use of waters within or without the Basin before exercising whatever jurisdiction or power it may have by reason of the Interstate Commerce clause.

(b) That in any exercise of such jurisdiction, where the exercise would conflict with established beneficial consumptive use rights, that right would be recognized as a property right.

At this time, 6:30 P. M., the Commission recessed, to resume deliberations the next morning.

December 30, 1942

Upon convening, Mr. Parker stated that he would like it put in the record the position of the Department of Agriculture in the matter of the compact, and called on Mr. Gwillim, who stated that the Department of Agriculture concurred with the allocations proposed to be made and the provisions for each state to administer the water allocated to it. Concluding, he read a letter from Mr. E. H. Wiecking, Land Use Coordinator, to Mr. Parker dated December 15, 1942. The letter is incorporated in these minutes.

The Commission then directed its attention to the two proposals made by Mr. Stinson before adjournment on the twenty-ninth. Earlier in the morning the State Commissioners had met in the office of Commissioner Scott for consideration of these proposals. Judge Stone, again speaking for the Commissioners, stated that the State caucus had reached the conclusion that Proposal No. 1 was not acceptable for the reason that it left the final determination to the Congress without the Legislatures being properly informed what was going to be done about it; whereas, it was felt that the Legislatures have a right to know the form in which the Compact is to be approved, if it is approved by Congress.

At the end of a general discussion, Mr. Parker asked the Commissioners individually whether they concurred in the conclusions stated by Judge Stone. All concurred. He then asked if there was any further discussion by Federal agencies. In response Dean Dawson stated that he was there at the request of the National Resources Planning Board, particularly to bring out that the sole concern of the Planning Board was the best development of all the resources of the basin; that the Board did not wish to be involved in any issue between Federal and states rights but was much interested in seeing the water resources developed for maximum state use.

The Commission then took up Proposal No. 2. There was a general discussion of the proposal point by point which occupied the balance of the morning and continued for some time after the noon recess. Following that, the Commission proceeded to work over the material in this proposal, tentatively adopting it, one section or sub-section after another, in many instances making changes in the original language.

Before adjourning, a committee consisting of Mr. Parker, Judge Stone and Mr. Stinson was selected to make a redraft of the compact, bringing all of the material together into a new draft to be presented to the Commission on December 31.

Thereupon, the Commission recessed at 5:30 until nine o'clock the morning of the 31st.

December 31, 1942

Upon convening, Mr. Parker asked whether the Commission should not communicate with Colonel Pick to tell him that agreement had been reached upon the essential features of the compact and ask him if he could not come to Lincoln for a conference. Colonel Pick was not in attendance on the 29th. Mr. Parker called his office at Omaha, but was advised that he was out of the office for the day.

Next, Mr. Parker asked to have put into the record a letter from the Department of the Interior, designating Mr. Stinson as the representative of that Department. That was agreeable to the Commissioners, and the letter is attached hereto.

The Commission then directed its attention to the new draft of a Compact which was read section by section and acted upon as follows:

The introductory statement was agreed to as rewritten.

Article I was agreed to as rewritten.

Some changes were made in the language of Article II, and it was then approved.

The interchange of Articles III and IV was approved.

The new Article III was approved, with some changes in phraseology.

The new Article IV was approved, with minor changes in phraseology and the elimination of the last sentence in the former draft.

Article V was approved without change.

Article VI was approved with changes in punctuation.

Article VII was approved, with minor changes.

Article VIII was approved without change.

Article IX was approved without change.

Articles X and XI were approved as rewritten. The Commission then adopted the Compact as a whole, and after authorizing the typing of the document in quadruplicate originals for the signatures of the Commissioners, recessed at 6:15 P. M. to meet again January 1.

January 1, 1943

The Commission convened at 9:30 A. M.

Colonel Pick was present, and the Federal representatives went into conference to consider the new draft. Thereafter, when the retyped documents were available they were carefully compared to ascertain that they were in all respects identical. After they had been checked each original was signed by the Commissioners for Colorado and Nebraska, and by the Federal Representative. Thereupon, the Commission adjourned.

The Commissioner for Kansas took the four originals with him to Topeka where, after consulting with the Governor, he signed them.

/s/ M. C. HINDERLIDER  
Commissioner for Colorado

/s/ GEO. S. KNAPP  
Commissioner for Kansas

/s/ WARDNER G. SCOTT  
Commissioner for Nebraska

/s/ GLENN L. PARKER  
Representative of the United States

Copies of the following letters and documents are attached hereto:

Letter, from Federal Power Commission to Chairman, House Committee on Reclamation and Irrigation, dated October 18, 1941.

Letter, from Federal Power Commission to G. L. Parker, Representative of the United States, dated December 26, 1942.

Draft of Proposed Compact Accompanying Commission's letter of December 26.

Letter, from Major General Thomas M. Robins to G. L. Parker, Chief Hydraulic Engineer, U. S. Geological Survey, dated December 17, 1942.

Letter, from Major General Thomas M. Robins to G. L. Parker, dated December 22, 1942.

Letter, from E. H. Wiecking, Land Use Coordinator to G. L. Parker, Dated December 15, 1942.

Letter, from M. E. Fortas, Under Secretary, Department of the Interior to Howard R. Stinson, Bureau of Reclamation, Department of the Interior.

[Copies of these letters have been omitted.]

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**ADDENDUM C**

**FIRST ANNUAL REPORT**

**Republican River**

**Compact**

**Administration**

**For the Year 1960**

---

**Lincoln, Nebraska**

**April 4, 1961**

Annual Report of

REPUBLICAN RIVER COMPACT  
ADMINISTRATION

For the Period July 15, 1959 to December 31, 1960

In conformity with provisions of the Rules and Regulations of the Republican River Compact Administration, the First Annual Report of the Administration is submitted, as follows:

1. Provisions of Administration's Rules and Regulations for Annual Report

Rule No. 12 of the Rules and Regulations provides that "The Administration at each annual meeting shall adopt and enter upon its records a report covering a summary of its transactions and proceedings for the preceding calendar year, the current status of its affairs and including such other matters as may be deemed appropriate by the official members. Copies of the report may be furnished to the President of the United States; the Governors of the States of Colorado, Nebraska and Kansas; officials of State and Federal Agencies and others as determined by the Administration."

This report covers the period from July 15, 1959, the date of the formal establishment of the Administration, to December 31, 1960.

2. Members of the Administration

In accordance with Article IX of the Republican River Compact the members of the Administration are:

J. E. Whitten, State Engineer of Colorado

R. V. Smrha, Chief Engineer, Division of Water Resources

State Board of Agriculture of Kansas

Dan S. Jones, Jr. Director, Department of Water Resources, Nebraska

3. Organization of the Administration

a. Although the Republican River Compact became effective on May 26, 1943, it was not until July 15, 1959, that the officials responsible for its administration established a formal organization for that purpose, designating it the "Republican River Compact Administration."

b. Three meetings of the Administration were held, as follows:

July 15, 1959, in Denver, Colorado

November 19, 1959, in Topeka, Kansas

March 30, 1960, in Lincoln, Nebraska

c. On November 19, 1959, following consultations with representatives of the several Federal and State agencies interested in the collection of hydrologic data and the development and use of the water resources of the Republican River Basin, the Administration established a "Committee on Procedure for Computation of Annual Virgin

Water Supply,” consisting of one representative of each of the official members of the Administration, and invited the U. S. Geological Survey, the Bureau of Reclamation, the U. S. Department of Agriculture and the Corps of Engineers to cooperate with the Committee. The Committee was instructed to prepare a separate report with respect to each of the drainage basins set out in Article III of the Republican River Compact.

d. On March 30, 1960, at the Annual Meeting, a progress report, including recommendations for continuing its work, was made by the Committee on Procedure for Computation of Annual Virgin Water Supply and the same was approved by the Administration. A copy of the progress report and recommendations is appended to this report as Appendix A.

e. On March 30, 1960, the Administration amended Rule 9 of the Rules and Regulations to provide that

“A regular annual meeting of the Administration shall be held upon the call of the Chairman during the months of March or April each year.”

f. On April 4, 1961, the Administration accepted a Progress Report and a report entitled “Formulas for the Computation of Annual Virgin Water Supply, Republican River Basin” prepared by the Committee on Procedure for Computation of Annual Virgin Water Supply which are appended hereto as Exhibits “B” and “C”, respectively.

Respectfully submitted

REPUBLICAN RIVER COMPACT  
ADMINISTRATION

By:

/s/ J.E. Whitten, Colorado Member

/s/ R.V. Smrha, Kansas Member

/s/ Dan S. Jones, Jr., Nebraska Member

Minutes of the Annual Meeting  
of the  
Republican River Compact Administration  
Lincoln, Nebraska

March 30, 1960

The meeting was called to order by the Chairman, Dan S. Jones, Jr., at 9:00 o'clock A.M., in the Lawyer's Room, Capitol Building, Lincoln, Nebraska.

\* \* \* \* \*

The following were in attendance:

|                    |  |                   |
|--------------------|--|-------------------|
| Dan S. Jones, Jr., | Chairman,  | Lincoln, Nebraska |
| R. V. Smrha,       | Official Member,   | Topeka, Kansas    |
| L. T. Burgess,     | Personal Representative<br>of J. E. Whitten,                         | Denver, Colo.     |
| Harris Mackey,     | Division of Water Resources,<br>Kansas State Board of Agriculture    | Topeka, Kansas    |
| M. E. Ball,        | Department of Water Resources,                                       | Lincoln Nebr.     |
| E. C. Reed,        | Director, Conservation & Survey<br>Division, University of Nebraska, | Lincoln, Nebr.    |
| H. E. Engstrom,    | U.S. Department of Agriculture,                                      | Lincoln, Nebr.    |
| Chas F. Keech,     | District Engineer, Groundwater<br>Branch, U. S. Geological Survey,   | Lincoln Nebr.     |

\* \* \* \* \*

The Chairman reported that he had appointed M. E. Ball as Chairman of the Committee on Procedure for Computation of Annual Virgin Water Supply pursuant to the action taken at the November meeting; and that the committee would present a progress report as the main item of business.

\* \* \* \* \*

The Chairman then called on Mr. Ball to present a progress report for the Committee on Virgin Water Supply which is composed of Mr. Burgess, Mr. Mackey and Mr. Ball. Mr. Ball presented a written report for his committee which was accepted and ordered made a part of the minutes by unanimous vote. A copy of the committee report is attached hereto as Exhibit 2. Each of the recommendations made in the report was considered and discussed by the Administration, and a summary thereof follows:

\* \* \* \* \*

Items No. 3 and No. 4 were discussed jointly. Mr. Ball noted that a study of the Nebraska irrigation well registration showed that, based on figures supplied by the well owners, there is an average of 96 acres irrigated per well. Mr. Reed and Mr. Keech felt that the average is more probably about 60 acres.

Mr. Reed and Mr. Keech agreed that an observation well program such as recommended by the committee, is needed and they are agreeable to expanding the current cooperative program to include it as financing will permit. Mr. Reed pointed out that great care must be used in evaluating observation well data, because fluctuations of two to four feet in the bottom land water table is not uncommon without

any groundwater withdrawals, while under similar conditions the upland water table fluctuation may be only two-tenths to three-tenths of a foot. Keech and Reed agreed that it will be many years before any depletions from groundwater use in the uplands will be noticable in the flow of the Republican River.

Mr. Reed discussed a groundwater map of Nebraska relating to water levels in observation wells in the fall of 1959. A copy of the map, identified as Exhibit 4 is attached is attached hereto. Mr. Reed called attention to articles of Luna B. Leopold, Chief, Water Resources Division, U.S.G.S., published in Survey bulletins, which place the relationship of groundwater and surface water in proper perspective.

Upon motion by Mr. Smrha, seconded by Mr. Jones, the following motion was unanimously adopted:

That the Administration concurs in the recommendations contained in the Progress Report of Committee on Procedure for Computation of Annual Virgin Water Supply.

A brief discussion followed relative to the developing of formulas for each major stream or tributary from which allocations are made in the compact. It was the belief of the committee that the procedures suggested by Kansas in its "1954" maps and charts be followed until revised procedures can be worked out. It was brought out that one of the problems of the committee is to evaluate certain factors which will vary for different sub-basins.

It was the consensus of the Administration and the Committee that the committee should meet as frequently as the accumulation of data for its use will permit.

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\* \* \* \* \*

The meeting adjourned at 4:15 P.M.

/s/ DAN S. JONES, JR., Chairman  
DAN S JONES, JR.

## [Appendix A]

Progress Report of  
Committee on Procedure for Computation  
of Annual Virgin Water Supply  
To  
The Republican River Compact Administration

The Committee held its first meeting February 25 and 26, 1960, at Lincoln, Nebraska assisted by representative of the U. S. Geological Survey, The U. S. Bureau of Reclamation, The U. S. Dept. of Agriculture, The Corps of Engineers and The University of Nebraska. Copies of Minutes of the Meeting were prepared and furnished to members of the "Administration," the Committee, and to persons designated by the Federal Agencies as their representatives to act as consultants to the Committee.

After detailed discussions concerning all the items involved in the Computation of Virgin Water Supply the following recommendations were adopted by the Committee for consideration by the "Administration."

\* \* \* \* \*

*No. 3* That, only the wells in the valley floor of the main Republican River and of its tributaries be considered as depleting the water supply of the Republican River, for present use in the Virgin Flow Formula.

*No. 4* That, a minium ground water Observation Well Program be established for determining the effect of "Table-Land" wells on the flow of the Republican River to indicate the change in the surface of the ground water table, and that stream gaging stations be established on selected north side tributaries of the Republican River between Harlan County Dam and Superior, Nebraska for the purpose of determining the effect of the Tri-County project and the "Table-Land"

wells in Gosper, Phelps, Kearney, Franklin, Webster, and Nuckolls counties, on the flow of the north side tributaries and the Republican River.

\* \* \* \* \*

Apparently the determination of the effect of pumping by “table-land” wells on the flow of the streams in the Republican River Basin must await considerable more research and data regarding the character of the groundwater aquifer and the behavior of groundwater flow before even approximate information is available as to the monthly or annual effects on stream flow. The groundwater representatives of the Geological Survey and the University of Nebraska reported that the effect of pumping of “table-land” wells is not subject to an exact determination and that it is possible that the table-land wells may not appreciably deplete stream flows. Recommendation number 4 is, therefore, for the purpose of observing the trend of the effect of such wells.

The Committee is not prepared at this time to present detailed Virgin Flow formulas for any of the tributaries of the Republican River. Additional study is required by each member of the Committee to analyze the diversion records and records of well registrations before the Committee can be prepared to agree on the various numerical factors for use of the formulas.

The Committee respectively requests the concurrence of the “Administration” in the recommendations heretofore listed and recommends further that the Administration request the U. S. Geological Survey to initiate studies required for selecting a pilot area for a return flow study and to select gaging stations on the north side tributaries of the Republican River between Harlan County Dam and Hardy, Nebraska, in accordance with recommendations 2 and 4.

Progress Report of  
Committee on Procedure for Computation  
of Annual Virgin Water Supply  
To  
The Republican River Compact Administration

April 4, 1961

The Committee has concluded the preparation of a report entitled Formulas for the Computation of Annual Virgin Water Supply, Republican River Basin which is presented herewith. The formulas do not contain the numerical factors necessary for making the computations. The report does however contain a paragraph on the general procedures to be followed in making the computation including an evaluation of factors to be used at present in the formulas. The numerical factors recommended by the committee for use in formulas were adopted after considerable research and consultation with the various federal and state agencies. Many of the factors are estimates based on meager information and are thus subject to change as additional information is obtained.

Many questions have arisen during the drafting of the formulas which have been tentatively agreed upon by the Committee in the preparation of the formulas. The decisions affect the formulas, therefore these questions need to be resolved by the administration. The questions are as follows:

2. It is recognized that the flow of Frenchman Creek crossing the Colorado-Nebraska stateline should be eliminated from the computation of virgin water supply. Normally there is no surface flow in Frenchman Creek at the stateline. The groundwater flow crossing the stateline has not been determined up to the present time and has not been considered in the present formulas. The diversions from groundwater in the Frenchman Creek basin in Colorado are considered to be tableland diversions.

\* \* \* \* \*

Any accurate determination of the virgin water supply in the Republican River Basin is dependent upon a considerable improvement in obtaining data for diversions by stream pumps and by pumping of groundwater from wells. \* \* \* \* \*

The Committee is not officially presenting computations of virgin water supply as a part of this progress report due to the necessity for the resolution of some questions by the administration. A tentative tabulation has been prepared, however, for the 1959 water year based on assumptions adopted by the Committee. This tabulation is for illustrative purposes only.

M.E. BALL

/s/ M.E. BALL

HARRIS L. MACKEY

/s/ HARRIS L. MACKEY

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[Appendix C]

R E P O R T  
to the  
REPUBLICAN RIVER COMPACT  
ADMINISTRATION

FORMULAS FOR THE COMPUTATION  
OF  
ANNUAL VIRGIN WATER SUPPLY  
REPUBLICAN RIVER BASIN

Committee on Procedure for Computation of  
Annual Virgin Water Supply

April 4, 1961

COMPUTATION OF VIRGIN WATER SUPPLY  
REPUBLICAN RIVER COMPACT  
ADMINISTRATION

INTRODUCTION

Article III of the Republican River Compact designates the drainage basins, or parts thereof, from which specific allocations are made to the States of Colorado, Kansas and Nebraska.

The annual virgin water supply for each of those designated drainage basins shall be computed by the formulas given herein.

GAGING STATIONS

The stream-gaging stations necessary to the virgin water supply formulas are described in U.S. Geological Survey Water-Supply Papers, Part 6-B, and are listed below:

\* \* \* \* \*

DRAINAGE BASINS

The drainage basins designated in Article III, Republican River Compact, are designed for use in the formulas as those drainage areas above the gaging stations at or near the mouths of the streams, with the following exceptions:

Prairie Dog Creek drainage basin is that drainage area above the gaging station near Woodruff;

Sappa Creek drainage basin is that drainage area above the gaging station, Sappa Creek near Stamford, and below the gaging station, Beaver Creek near Beaver City;

Beaver Creek drainage basin is that drainage area above the gaging station near Beaver City;

Medicine Creek drainage basin is that drainage area above the gaging station below Harry Strunk Lake;

The main stem of the Republican River is that area between the junction of the North Fork and the Arikaree River and the gaging station near Hardy and includes (1) those areas below the gaging stations of the designated drainage basins and (2) all of Blackwood Creek drainage basin.

#### BASIC DATA

Basic data for use in the formulas shall be obtained from the following sources:

1. Stream discharges from surface water records as compiled by the U.S. Geological Survey;
2. Total reservoir evaporation records as computed by the U.S. Corps of Engineers;
3. Precipitation records as compiled by the U.S. Weather Bureau;
4. Reservoir elevations, surface areas and storage contents from records as compiled by the operating agency;
5. Irrigation diversions or irrigated acreages from records as compiled by each State.

## GENERAL PROCEDURES

Reservoir evaporation shall be the total evaporation corrected for the precipitation upon the reservoir surface area.

Average monthly reservoir surface areas shall be computed by applying the average of the mean daily reservoir elevations to the most recent area-capacity tables.

Depletions of stream flows due to erosion control practices and stock-water ponds have not been included in the present virgin water supply formulas. Representatives of the U.S. Department of Agriculture have indicated there has been no success in isolating the effect of such practices on stream flow.

Irrigation diversions from ground water shall be limited to those by wells pumping from the alluvium along the stream channels. The determination of the effect of pumping by "table-land" wells on the flows of the streams in the Republican River Basin must await considerably more research and data regarding the character of the ground-water aquifers and the behavior of ground-water flow before even approximate information is available as to the monthly or annual effects on stream flows. The ground-water representatives of the Geological Survey and the University of Nebraska reported that the effect of pumping by "table-land" wells is not subject to an exact determination and that it is possible those wells may not appreciably deplete stream flows. The wells in the Frenchman Creek drainage basin in Colorado have been considered as "table-land" wells.

Irrigation diversions by canals, stream pumps and wells for which recorded diversions are not available shall be computed by applying an average annual diversion rate to the irrigated acreages.

Return flows from the lands irrigated by major project developments flowing into two or more designated drainage basins shall be divided in the ratio of the irrigated lands from which the water returns to each drainage basin.

Return flows are considered to be reflected in stream discharge records during the same year the irrigation diversions are made.

### EVALUATION OF FACTORS

Present computations of virgin water supply by the formulas have been based upon the following factors:

1. The irrigation diversions by canals, stream pumps and wells for which recorded diversions are not available shall be computed by applying a diversion rate of 1.6 acre-feet per acre per year to the irrigated acreages. Selection of this rate of diversion was based upon the average of rates reported in 1959 by water users in the Republican River Basin in Kansas. This diversion rate may vary from year to year as weather conditions change, operating procedures are modified, and additional information is made available.
2. Return flows from the lands irrigated by small canals, stream pumps and wells shall be computed as 25 per cent of the annual diversions. Irrigation diversions for these lands apparently average less

than 2 acre-feet per acre and it was thought the return flow would be less than for the major projects and was selected as approximately 25 per cent.

3. Return flows from the lands irrigated by major project development shall be computed as per cent of annual diversions based on information furnished the Committee by the U.S. Bureau of Reclamation. The percentages of annual diversions to be used at the present time are given in the following table, and shall be adjusted each year on basis of additional information to be furnished by the U.S. Bureau of Reclamation.

| <u>Unit</u>                  | Return Flow<br>as<br><u>Per Cent of Diversions</u> |
|------------------------------|--|
| St. Francis Unit             | 38   |
| Frenchman-Cambridge Division | 36   |
| Bostwick Division-Nebraska   |  |
| Franklin & Red Cloud Unit    | 43   |
| Superior Unit                | 42   |
| Courtland Unit               | 38   |
| Bostwick Division-Kansas     |  |
| Bostwick above Scandia       | 36   |
| Bostwick below Scandia       | 39   |
| Almena Unit                  | 33   |
| Hale Ditch                   | 38   |
| Haigler Canal                | 38   |

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FORMULAS FOR THE COMPUTATION  
OF  
ANNUAL VIRGIN WATER SUPPLY

Prairie Dog Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near Woodruff;
- plus, the evaporation from Norton Reservoir;
- plus, or minus, the change in storage in Norton Reservoir;
- plus, the diversions by the Almena Canal;
- plus, the other irrigation diversions of surface water in Kansas;
- plus, the irrigation diversions from ground water in Kansas;
- minus, the return flows from the Almena Irrigation District;
- minus, the return flows from the lands irrigated by other divisions from surface water in Kansas;
- minus, the return flows from the lands irrigated by diversions from ground water in Kansas.

Sappa Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near Stamford;

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minus, the recorded discharge of Beaver Creek near  
Beaver City;

plus, the irrigation diversions of surface water from Sappa  
Creek in Kansas and Nebraska and from Beaver  
Creek downstream from the gaging station,  
Beaver Creek near Beaver City;

plus, the irrigation diversions from ground water along  
Sappa Creek in Kansas and Nebraska and from  
ground water along Beaver Creek downstream  
from the gaging station, Beaver Creek near  
Beaver City;

minus, the return flows from the lands irrigated by the  
diversions from surface water;

minus, the return flows from the lands irrigated by  
diversions from ground water.

Beaver Creek Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge near Beaver City;

plus, the irrigation diversions of surface water in  
Colorado, Kansas and Nebraska;

plus, the irrigation diversions from ground water in  
Colorado, Kansas and Nebraska;

minus, the return flows from the lands irrigated by  
the diversions from surface water;

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minus, the return flows from the lands irrigated by  
diversions from ground water.

Medicine Creek Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge below Harry Strunk Lake;

plus, the evaporation from Harry Strunk Lake;

plus, or minus, the change in storage in Harry Strunk  
Lake;

plus, the irrigation diversions of surface water;

plus, the irrigation diversions from ground water;

minus, the return flows from the lands irrigated by  
the diversions from surface water;

minus, the return flows from the lands irrigated by  
diversions from ground water.

\* \* \* \* \*

[Formulas for computing the virgin water supply for other  
drainage basins are similar and have been omitted.]

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**ADDENDUM D**

**FORMULAS FOR THE COMPUTATION  
OF  
ANNUAL VIRGIN WATER SUPPLY  
AND CONSUMPTIVE USE  
REPUBLICAN RIVER COMPACT BASIN**

**As Adopted at the  
Twenty-third Annual Meeting of the  
Republican River Compact Administration  
at Topeka, Kansas**

**August 19, 1982  
and  
Revised June, 1990**

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**Computation of Virgin Water Supply  
Republican River Compact Administration**

INTRODUCTION

Article III of the Republican River Compact designates the drainage basins, or parts thereof, from which specific allocations are made to the States of Colorado, Kansas and Nebraska.

The annual virgin water supply for each of those designated drainage basins shall be computed by the formulas given herein.

GAGING STATIONS

The stream-gaging stations necessary to the virgin water supply formulas are described in U. S. Geological Survey Water-Supply Papers, Part 6-B, and are listed below:

| <u>Station Number</u> | <u>Station Name</u>   |
|-----------------------|---|
| 6B-8215.00            | Arikaree River at Haigler,<br>Nebr.                               |
| 6B-8230.00            | North Fork Republican River<br>at Colorado-Nebraska State<br>line |
| 6B-8235.00            | Buffalo Creek near Haigler,<br>Nebr.                              |
| 6B-8240.00            | Rock Creek at Parks, Nebr.  |
| 6B-8275.00            | South Fork Republican River<br>near Benkelman, Nebr.              |
| 6B-8355.00            | Frenchman Creek at Culbert-<br>son, Nebr.                         |
| 6B-8365.00            | Driftwood Creek near<br>McCook, Nebr.                             |

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|            |   |
|------------|---|
| 6B-8380.00 | Red Willow Creek near Red Willow, Nebr.       |
| 6B-8425.00 | Medicine Creek below Harry Strunk Lake, Nebr. |
| 6B-8470.00 | Beaver Creek near Beaver City, Nebr.          |
| 6B-8475.00 | Sappa Creek near Stamford, Nebr.              |
| 6B-8485.00 | Prairie Dog Creek near Woodruff, Kans.        |
| 6B-8525.00 | Courtland Canal at Nebraska-Kansas State line |
| 6B-8535.00 | Republican River near Hardy, Nebr.            |

DRAINAGE BASINS

The drainage basins designated in Article II, Republican River Compact, are defined for use in the formulas as those drainage areas above the gaging stations at or near the mouths of the streams, with the following exceptions:

Prairie Dog Creek drainage basin is that drainage area above the gaging station near Woodruff;

Sappa Creek drainage basin is that drainage area above the gaging station, Sappa Creek near Stamford, and below the gaging station, Beaver Creek near Beaver City;

Beaver Creek drainage basin is that drainage area above the gaging station near Beaver City;

Medicine Creek drainage basin is that drainage area above the gaging station below Harry Strunk Lake;

The main stem of the Republican River is that area between the junction of the North Fork and the Arikaree

River and the gaging station near Hardy and includes (1) those areas below the gaging stations of the designated drainage basins and (2) all of the Blackwood Creek drainage basin.

#### BASIC DATA

Basic data for use in the formulas shall be obtained from the following sources:

1. Stream discharges from surface water records as compiled by the U. S. Geological Survey;
2. Total monthly reservoir evaporation records as computed by the U. S. Corps of Engineers;
3. Precipitation records as compiled by the U. S. Weather Bureau;
4. Reservoir elevations, surface areas and storage contents from records as compiled by the operating agency;
5. Irrigation diversions or irrigated acreages from records as furnished by each State;
6. Municipal and industrial diversions as furnished by each State.

#### GENERAL PROCEDURES

Net reservoir evaporation shall be the total evaporation corrected for the precipitation upon the reservoir surface area.

Average monthly reservoir surface areas shall be computed by applying the average of the daily reservoir elevations to the most recent area table.

Depletion of stream flows due to erosion control practices, stockwater ponds, and municipal and industrial diversions of less than 50 acre-feet have not been included in the present virgin water supply formulas.

Diversions from surface water for this computation shall include diversions for irrigation, municipal and industrial uses.

Diversions from groundwater shall be limited to those by wells pumping from the alluvium along the stream channels for municipal, industrial and irrigation uses. The determination of the effect of pumping by upland wells on the flows of the streams in the Republican River Basin must await considerably more research and data. The wells in the Frenchman Creek drainage basin in Colorado have been considered as upland wells.

Return flows from the lands irrigated by major project developments flowing into two or more designated drainage basins shall be divided in the ratio of the irrigated lands from which the water returns to each drainage basin.

Return flows are considered to be reflected in stream discharge records during the same year the diversions are made.

Industrial uses shall include diversions relating to manufacturing and commercial practices.

#### EVALUATION OF FACTORS

Computations of virgin water supply by the formulas are based upon the following factors:

1. The diversions by canals, stream pumps and wells for which recorded diversions are not available

shall be computed by each state based upon the best information available.

2. Return flows from the lands irrigated by small canals, stream pumps and wells shall be computed as 25 percent of the annual diversions.
3. Return flows from the lands irrigated by major project development shall be computed as percent of annual diversions based on data furnished by the U. S. Bureau of Reclamation. Return flows from the lands irrigated by the Hale Ditch and the Haigler Canal shall be computed as 38 percent of annual diversions.
4. Return flows from municipal and industrial uses shall be computed as a percent of annual diversion based upon data furnished by each State. If data are not available, then return flow shall be computed as 50 percent of annual municipal and 75 percent of annual industrial diversions.

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FORMULAS FOR THE COMPUTATION  
OF  
ANNUAL VIRGIN WATER SUPPLY

Prairie Dog Creek Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge near Woodruff;

plus, the net evaporation from Norton Reservoir;

plus, or minus, the change in storage in Norton  
Reservoir;

plus, the diversions by the Almena Canal;

plus, the other diversions of surface water in Kansas;

plus, the diversions from groundwater in Kansas;

minus, the return flows from the Alema Irrigation  
District;

minus, the return flows from other surface water  
diversions in Kansas;

minus, the return flows from groundwater diversions in  
Kansas.

Sappa Creek Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge near Stamford;

minus, the recorded discharge of Beaver Creek near  
Beaver City;

plus, the diversions of surface water from Sappa Creek in Kansas and Nebraska and from  
and Nebraska and from Beaver Creek downstream from the gaging station, Beaver Creek near Beaver City;  
plus, the diversions from groundwater along Sappa Creek in Kansas and Nebraska and  
from groundwater along Beaver Creek downstream from the gaging station, Beaver Creek near Beaver City;  
minus, the return flows from surface water diversions;  
minus, the return flows from groundwater diversions.

Beaver Creek Drainage Basin

Annual Virgin Water Supply equals  
the recorded discharge near Beaver City;  
plus, the diversions of surface water in Colorado, Kansas and Nebraska;  
plus, the diversions from groundwater in Colorado, Kansas and Nebraska;  
minus, the return flows from surface water diversions;  
minus, the return flows from groundwater diversions.

## Medicine Creek Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge below Harry Strunk Lake;

plus, the net evaporation from Harry Strunk Lake;

plus, or minus, the change in storage in Harry Strunk Lake;

plus, the diversions of surface water;

plus, the diversions from groundwater;

minus, the return flows from surface water diversions;

minus, the return flows from groundwater diversions.

\* \* \* \* \*

[Formulas for computing the virgin water supply for other drainage basins are similar and have been omitted]

FORMULAS FOR THE COMPUTATION  
OF  
ANNUAL CONSUMPTIVE USE  
REPUBLICAN RIVER BASIN

Prairie Dog Creek Drainage Basin

Annual Consumptive Use in Kansas equals

the diversions in Kansas;

minus, the return flows from those diversions;

plus, the net evaporation from Norton Reservoir.

Annual Consumptive Use in Nebraska equals  
the diversions in Nebraska;  
minus, the return flows from those diversions.

Sappa Creek Drainage Basin

Annual Consumptive Use in Kansas equals  
the diversions in Kansas;  
minus, the return flows from those diversions.

Annual Consumptive Use in Nebraska equals  
the diversions in Nebraska;  
minus, the return flows from those diversions.

Beaver Creek Drainage Basin

Annual Consumptive Use in Colorado equals  
the diversions in Colorado;  
minus, the return flows from those diversions.

Annual Consumptive Use in Kansas equals  
the diversions in Kansas;  
minus, the return flows from those diversions.

Annual Consumptive Use in Nebraska equals  
the diversions in Nebraska;  
minus, the return flows from those diversions.

Medicine Creek Drainage Basin

Annual Consumptive Use in Nebraska equals

the diversions in Nebraska;

minus, the return flows from those diversions including  
the river flows to the main stem of the Republican River;

\* \* \* \* \*

[Formulas for computing consumptive use for other drainage  
basins are similar and have been omitted.]