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**MEMORANDUM**

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August 25, 2009

**TO:** Water Resources Review Committee

**FROM:** Lauren Ris, Senior Research Assistant, 303-866-3264

**SUBJECT:** Interstate Compacts and Colorado's Effort to Comply with the Republican River Compact

Approximately 10 million acre-feet of river water flows across Colorado's borders annually. Almost all of this water is legally obligated to downstream states and Mexico by interstate compacts and federal court decisions. The following memorandum describes how these legal mechanisms are created and how they allocate Colorado interstate rivers, focusing on the Republican River Compact and Colorado's compliance efforts.

### **Allocation of Interstate Rivers**

***Equitable apportionment.*** In 1907, the U.S. Supreme Court determined that all states sharing a stream were entitled to an equitable share of the river water.<sup>1</sup> It also determined that a state may file directly with the federal court to reallocate the interstate stream based on the state need for additional water. Under this decision, a state was allowed to apply to the court for a change in its share of a river based on its need. Alternatively, the compact clause of the U.S. Constitution allows states to secure a share of the river by contract.<sup>2</sup>

***Interstate compacts.*** A compact is an agreement between two or more states that is approved by Congress and each affected state's legislature. Any changes to interstate compacts require statutory changes in each state and an amendment to federal law.

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<sup>1</sup>Kansas v. Colorado 206 U.S. 46 27 S.Ct. 655 (1907)

<sup>2</sup>U.S. Const. art. 1, sec. 10.

Compacts and court-ordered decrees are administered in the same manner as other water rights in the state. During times of shortage, certain in-state water users may be prohibited from diverting water until a compact obligation is satisfied. Compacts enable a state to secure a portion of an interstate stream and diminish the incentive to rush to develop the water as a means of protecting a state's share of a river. Instead, compacts protect a share of the river and allow them to grow at their own pace. For example, in 1922, Colorado signed the Colorado River Compact, which allocated to Colorado 51.75 percent of the 6.5 million acre-feet of Colorado River water that is reserved from the upper basin states. However, Colorado's demand for water from the Colorado River Basin has yet to reach its compact entitlement. While it is allocated between 3.079 to 3.855 million acre feet per year, the state currently consumes an average of 2.3 million acre feet per year, enabling the state to develop the rest of the allocation as it sees fit.<sup>3</sup>

Colorado sought to enter into interstate compacts after the U.S. Supreme Court ruled in 1922 that prior appropriation applied regardless of state lines.<sup>4</sup> In accordance with this ruling, a rapidly growing state, like California, could have established priority use to the disadvantage of slower growing states. Delph Carpenter, a Colorado attorney, initiated the successful negotiation of the Colorado River Compact. The Supreme Court and Congress now encourage compacts as a means of resolving interstate disputes over water.<sup>5</sup>

## **Republican River Compact**

**Background.** The Republican River is a 24,900 square-mile basin that begins on Colorado's northeastern high plains and flows first into Kansas and then into Nebraska. Water from the river is allocated between the three states according to the Republican River Compact ratified by Colorado, Kansas, Nebraska, and the U.S. Congress in 1942.<sup>6</sup> Under this compact, Colorado is allocated 54,100 acre feet per year depending upon the water supply. This total is to be derived from the sources and amounts specified in Table 1, subject to available quantities of water.

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<sup>3</sup> Statewide Water Supply Initiative, Colorado Basin, available from the Colorado Water Conservation Board at <http://cwcb.state.co.us>.

<sup>4</sup> Wyoming v. Colorado, 259 U.S. 419 42 S.Ct. 552 (1922)

<sup>5</sup> Arizona v. California, 373 U.S. 557 83 S.Ct. 1468 (1963)

<sup>6</sup> Section 37-67-101 and 37-67-102, C.R.S

**Table 1**  
**Colorado's Water Allocation Under the Republican River Compact**

| Drainage Basin                     | Allocation       | Percent of Water in the Basin          |
|------------------------------------|------------------|--|
| North Fork of the Republican River | 10,000 acre-feet | 22 percent of the water in the basin   |
| Arikaree River                     | 15,400 acre-feet | 78.5 percent of the water in the basin |
| South Fork of the Republican River | 25,400 acre-feet | 44.4 percent of the water in the basin |
| Beaver Creek                       | 3,300 acre-feet  | 20 percent of the water in the basin   |

Source: Article IV, Republican River Compact

Additionally, Colorado is allocated the entire water supply of the Frenchman Creek and Red Willow Creek drainage basins. The compact provides that allocations made to each state from each source are subject to proportional increases or decreases if the water supply of the source varies more than 10 percent from the average annual water supply set forth in the compact.

***Republican River Compact Administration.*** Article IX of the compact provides for the administration of the compact through the officials who administer the public water supplies in the three states. Although the compact does not expressly provide for an organization, the three State Engineers, appointed by the governors of the respective states, organized themselves into the Republican River Compact Administration (RRCA) in 1959. The states agreed that disputes over any matter relating to the administration of the compact would first be brought to the RRCA for resolution. If the dispute cannot be resolved by the RRCA, it may be submitted to non-binding arbitration, or if the affected states agree, to binding arbitration. States may also choose to have disputes litigated and decided by the U.S. Supreme Court.

***Kansas v. Nebraska.*** The Republican River Compact became effective in 1943. In the 1980s, Kansas began to express concern that ground water in the basin should also be regulated under the compact. In May 1998, after unsuccessful efforts to reach a solution, Kansas sued Nebraska for violating the Republican River Compact by allowing the unimpeded development of thousands of wells hydraulically connected with the Republican River and its tributaries. Kansas further alleged that, as a result, Nebraska was using more water than its allocation under the compact and was depriving Kansas of its full entitlement. As one of the compact states, Colorado was named as a defendant, but Kansas sought no relief against Colorado. Nebraska filed a motion to dismiss the case, arguing that the compact only regulated use of surface flow.

In 1999, the U.S. Supreme Court assigned a Special Master to hear the case. While

the Supreme Court is the only court that can decide disputes between states, it assigns water rights cases to Special Masters to decide motions and hearings. The Special Master determined that streamflow in the Republican River comes from both surface runoff and ground water discharge, and interception of either of those streamflow sources can cause a state to receive more than its compact allocation and violate the compact. He recommended that the Supreme Court deny Nebraska's motion to dismiss, which the court did in June 2000. After this ruling, the three states requested a stay in the trial and agreed to seek a mediated settlement.<sup>7</sup>

***Final Settlement Stipulation.*** In 2002, a settlement was reached between the states and was affirmed by the U.S. Supreme Court in May 2003.<sup>8</sup> The Final Settlement Stipulation waives all claims and damages through December 15, 2002, and places a moratorium on future ground water development that violates the compact, with certain exceptions. One of the exceptions is for wells acquired or constructed by a state for the sole purpose of offsetting stream depletions in order to comply with its compact allocations, although an augmentation plan and related accounting procedures for these wells must be approved by the RRCA prior to implementation. In the settlement, the states also agreed:

- to clarifications and accounting improvements that will assist the RRCA in administering the compact;
- that stream flow depletions caused by well pumping would be determined using a ground water model that would be jointly developed by a modeling committee and that compact accounting would be done on a five-year running average, the first of which would be 2003 to 2007; and
- to cooperate with the federal government in conducting studies to assess the impacts of non-federal reservoirs and land terracing upon the water supply the basin, as well as evaporation, and delivery and storage infrastructure studies.<sup>9</sup>

***Settlement disputes.*** By 2007, several additional disputes arose between the states regarding compliance with the Final Settlement Stipulation and the Republican River Compact. Kansas alleged that Nebraska was significantly out of compliance with the first agreed upon statewide five-year accounting period set forth in the settlement from 2003 to 2007. The RRCA considered Kansas and Nebraska's dispute, but was unable to resolve all of the areas of disagreement. The dispute was then submitted to non-binding arbitration.

The arbitrator appointed to resolve the dispute rejected most of Nebraska's claims in a June 30, 2009, decision.<sup>10</sup> In the non-binding decision, the arbitrator ruled that Kansas

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<sup>7</sup> Republican River Compact Background and Litigation History, Kansas Department of Agriculture, [www.ksda.gov](http://www.ksda.gov).

<sup>8</sup> Final Report of the Special Master, Supreme Court of the United States, *State of Kansas v. State of Nebraska and State of Colorado*, September 17, 2003. Available at: [www.republicanrivercompact.org](http://www.republicanrivercompact.org).

<sup>9</sup> Final Report of the Special Master, Supreme Court of the United States, *State of Kansas v. State of Nebraska and State of Colorado*, September 17, 2003. Available at: [www.republicanrivercompact.org](http://www.republicanrivercompact.org).

<sup>10</sup> Non-Binding Arbitration in Accordance with Final Settlement Stipulation, June 30, 2009, available at: [www.ksda.gov/includes/document\\_center/interstate\\_water\\_issues/RRC\\_Docs/FinalArbitrationDecision.pdf](http://www.ksda.gov/includes/document_center/interstate_water_issues/RRC_Docs/FinalArbitrationDecision.pdf)

did not adequately prove its claims against Nebraska for monetary damages, but agreed that there was some impact. The arbitrator recommended that Nebraska pay Kansas \$10,000 in damages for overusing its portion of the river's water (Kansas originally requested \$72 million in damages). Neither Kansas nor Nebraska claimed damages from Colorado. The arbitrator also rejected Nebraska's proposed changes to the way water allocations are calculated. Specifically, the arbitrator provided findings on the following areas of disagreement:

- accounting procedures related to estimating computed beneficial consumptive use for groundwater and imported water supply;
- accounting procedures related to the Haigler Canal used for irrigation in Nebraska near the Colorado and Nebraska borders;
- groundwater model accounting;
- losses to Kansas water users from overuse in Nebraska;
- economic impacts of the water loss to Kansas; and
- future compact compliance.<sup>11</sup>

The states do not have to accept the arbitrator's decision and can choose to take their issues to the U.S. Supreme Court; however, none of the states have indicated that they will do so.

### **Colorado's Efforts to Comply with the Republican River Compact and Settlement**

***The Republican River Water Conservation District.*** The Republican River Water Conservation District was created in 2004 to help Colorado comply with the 2003 settlement agreement.<sup>12</sup> The district includes Phillips and Yuma counties, and those portions of Kit Carson, Lincoln, Logan, Sedgwick, and Washington counties within the Republican River basin. The district is governed by a 15-member board of directors comprised of one member appointed by the county commissioners of each of the seven counties within the district, one member appointed by the boards of the seven ground water management districts within the district, and one member appointed by the Colorado Ground Water Commission. The district works to administer programs and projects to help the state achieve its water delivery obligations to Nebraska and Kansas.

***Compliance with annual allocations.*** Since December 2002, Colorado has exceeded its annual allocations of beneficial consumptive use under the compact by an average of 11,350 acre feet per year.<sup>13</sup> While some reduction of this amount is expected in the future as the result of irrigated acreage retirement programs, it is projected that the

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<sup>11</sup>Non-Binding Arbitration in Accordance with Final Settlement Stipulation, June 30, 2009, available at: [www.ksda.gov/includes/document\\_center/interstate\\_water\\_issues/RRC\\_Docs/FinalArbitrationDecision.pdf](http://www.ksda.gov/includes/document_center/interstate_water_issues/RRC_Docs/FinalArbitrationDecision.pdf)

<sup>12</sup> Section 37-50-101 C.R.S., et seq.

<sup>13</sup>Colorado Water Conservation Board, memo to board members, January 14, 2008.

deficit will increase gradually to 15,000 acre feet by 2039 if additional action is not taken.<sup>14</sup>

***Voluntary water retirements.*** The district promotes conservation through voluntary participation as one means to achieving compliance. By utilizing federal programs, the district offers financial incentives to producers who voluntarily retire water rights to reduce consumptive use to the stream flows. For example, the district is implementing a program to retire irrigated land that will reduce draws on the groundwater that is connected to the Republican River. The district's land retirement program is partially funded through the federal Environmental Quality Incentive Program (EQIP) and the federal Conservation Reserve Enhancement Program (CREP). Through these programs, wells have been retired for over 30,000 acres. Under CREP, 19,758 acres were shut down with \$34.1 million from the federal program and \$5.6 million from state funding. Under EQUIP, 10,797 acres were shut down with \$4.5 million from the federal program and \$5.4 from state funding.<sup>15</sup>

***Pipeline project.*** Until recently, the district focused its efforts on providing local cost-sharing for these federal programs to voluntarily retire irrigated acreage in the basin. However, when the state continued to exceed its compact allocations in 2005 and 2006, the district began to consider other alternatives. In addition to voluntary water retirements, the district is turning its focus toward compact compliance through a pipeline project that will deliver water to the Republican River and help satisfy the Colorado's water obligations to Nebraska and Kansas under the compact. The pipeline will deliver water from wells located 8 to 15 miles north of the North Fork of the Republican River to that same stream at the Colorado/Nebraska state line. The source of water for the pipeline will come from existing irrigation wells where pumping has been limited to historic use. The district expects that construction could begin in 2010 with deliveries beginning in 2011.<sup>16</sup>

***Pipeline funding.*** The total cost of the pipeline project is \$71 million: \$50 million to purchase the water rights and \$21 million for the water delivery system. In 2008, the Colorado General Assembly approved a loan from the Colorado Water Conservation Board (CWCB) Construction Fund of \$60.6 million to the district to build the pipeline. The remaining funding for the pipeline will be generated through water use fees.

***Water use fees.*** The Republican River Water Conservation District established a water activity enterprise in October 2004. As an enterprise, the district receives most of its revenue from fees and does not require voter approval to increase fees. The district imposed a use fee of \$14.50 per acre on ground water irrigation diversions by post-compact wells within the district (there are approximately 500,000 acres in the basin irrigated by post-compact wells), and \$11.60 per acre foot use fee on post-compact groundwater diversions for municipal and commercial use.<sup>17</sup>

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<sup>14</sup>Ibid.

<sup>15</sup> Republican River Water Conservation District

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

***Pipeline approval.*** While the Republican River Conservation District Board of Directors has approved the pipeline project, the RRCA has not. Under the settlement terms, all three states must approve the proposal. The RRCA's annual meeting was held August 11-12 in Lincoln, Nebraska, where a final vote on the pipeline was held. The commissioners of Nebraska and Kansas both voted not to approve.<sup>18</sup> The areas of disagreement include the following:

- The states disagree on how the pipeline water will be accounted for in the compact. Colorado believes that the water should be credited 1 to 1 as it is delivered against the state's depletions. Kansas and Nebraska believe that, according to the jointly developed groundwater model, the credit should only be 80 percent.
- Kansas believes that Colorado may be using some of Kansas' allocation in the South Fork sub-basin of the Republican River and holds that this is a violation of the compact. Colorado believes that the compact addresses whole basins rather than sub-basins and therefore is not out of compliance.
- Nebraska is concerned about the transportation losses associated with water deliveries from the pipeline. Colorado believes that the pipeline would be replacing water and that such losses are integral to the normal operations of the compact.
- Nebraska and Kansas are concerned about the potential to overpump the pipeline. Colorado has been working on pumping limitations.<sup>19</sup>

Colorado is filing for non-binding arbitration to settle the matter and discussions between the three states is continuing. While waiting for a final decision, the Republican River Water Conservation District has purchased the water rights with the loan from the CWCB and are acquiring the land easements needed for the pipeline's construction.<sup>20</sup>

***Bonny Reservoir.*** One of Kansas' concerns with the pipeline project is its belief that Colorado is impairing Kansas' ability to use its allocation from the South Fork sub-basin under the compact. A possible solution to comply with Kansas' view of the South Fork sub-basin impairment is to drain Bonny Reservoir. Bonny Reservoir is located on the South Fork of the Republican River, just west of the Kansas border in Yuma County. Evaporation and seepage from Bonny Reservoir reduces the flow of water in the South Fork downstream, and these losses are charged to Colorado as beneficial consumptive use under the compact. The RRWCD Board has concluded that the only feasible way to reduce these losses is to drain the reservoir. The RRWCD Board has requested assurances from the State of Colorado that if the board goes forward with the pipeline project, the state will drain the reservoir or take other equivalent actions. In May and June 2009, the State

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<sup>18</sup> Colorado State Engineer's Office

<sup>19</sup> Colorado State Engineer's Office

<sup>20</sup> Notice of Invocation of Non-Binding Arbitration, Colorado Division of Water Resources, August 21, 2009.

Engineer's Office ordered the releases of water into the South Fork in order to determine how much of the water released from Bonny Reservoir would make it to the measuring gauge at the state border. While the State Engineer's Office is trying to maintain Bonny Reservoir at 10,500 to 11,000 acre feet through the boating season, at this time it has not made a determination as to whether there will be additional releases when the active boating season is over.<sup>21</sup>

***Measurement of well use.*** In a separate effort to comply with the compact, the State Engineer's Office promulgated rules and regulations governing the diversion, use, and control of water resources in the Republican River basin. The rules were adopted in September 2008 to assist Colorado in obtaining information needed for administering water in the basin. The rules include requirements for measuring well pumping and operating wells within the basin.<sup>22</sup>

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<sup>21</sup> Colorado State Engineer's Office

<sup>22</sup> 2 C.C.R. 402-16