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MEMORANDUM

December 24, 2009

TO: Interested Persons

FROM: David Beaujon, Senior Analyst, 303-866-4781

SUBJECT: Regulation of Transbasin Diversions and Large Water Transfers

This memorandum:

- identifies the 39 transbasin diversions in Colorado;
- summarizes how transbasin diversions are regulated under Colorado's water law and certain federal laws;
- summarizes the major provisions of the *Water for the 21st Century Act* that addresses interbasin water supply issues;
- describes a study commissioned by the General Assembly in 2007 to determine the availability of water in the Colorado River Basin; and
- describes recent legislation to form conservation districts to address water supply challenges in the south metro area.

Transbasin Diversions in Colorado

Approximately 80 percent of the rain and snow that falls in the state falls west of the Continental Divide; however, most of the state's population and irrigated agriculture is on the eastern side. Consequently, water users have been diverting water from west of the continental divide to the eastern plains — called a transbasin or transmountain diversion — since the 1880s. According to the Division of Water Resources, there are 39 transbasin diversions in Colorado including 25 diversions that move water from the Colorado River Basin to eastern plains of Colorado. The attached map identifies the 39 transbasin diversions in Colorado. The largest transbasin diversion — the Adams Tunnel — is authorized to divert up to 231,060 acre-feet of water annually from the Upper Colorado River Basin to the South Platte River Basin for use by cities and irrigators. This tunnel is part of the Colorado-Big Thompson Project that is operated by the Northern Colorado Water Conservancy District. Most transbasin diversions move water from the wetter Colorado River Basin to the drier South Platte and Arkansas River basins. However, nine transbasin diversions move water between tributaries of the Colorado River and eight transbasin diversions move water from the Colorado River Basin to the Rio Grande Basin.

Regulation of Transbasin Diversions

Overview of Colorado's water law. Colorado's water law, called the doctrine of prior appropriation, was developed to address the state's water supply challenges including its unreliable rainfall and the irregular distribution of its natural water supply. According to Colorado's water law, a water right is a property interest that is separate from the land. This enables water to be moved from where it occurs naturally to where it is needed. Provided other water rights are not injured, water in a stream that is not owned by another person — called *unappropriated water* — is a public resource that is available to anyone who can apply it to a beneficial use such as irrigation or municipal use.¹

Case law concerning transbasin diversions. In general, the law regulates transbasin diversions and diversions from the same stream system where the water will be used in the same manner. In 1882, the Colorado Supreme Court determined that the right to use unappropriated water applies to diversions that move water from one stream system to another. Specifically, it determined that "the right to water acquired by priority of appropriation thereof is not in any way dependent upon the locus of its application to the beneficial use designed."² In a 1961 decision concerning the export of water from the Colorado River Basin, the court stated that "we find nothing in the Constitution which even intimates that waters should be retained for use in the watershed where originating." It also said that the "right to appropriate water and put the same to beneficial use at any place in the state is no longer open to question."³

Reuse of foreign water. Most beneficial uses of water consume only a portion of the water that is diverted from a stream. For example, an acre of corn consumes approximately 40 percent of the irrigation water that is applied to it. The unconsumed water returns to the stream system through surface runoff or underground percolation. In general, Colorado water law permits only one use of diverted water as return flows are subject to appropriation. However, the one-use requirement does not apply to water that is introduced into a stream system from an unconnected stream system, called *foreign water*. State law allows foreign water, including transmountain water, to be reused to extinction.⁴

Limits on exports from the Colorado River Basin by water conservancy districts. The Conservancy District Act provides a mechanism for local communities to form water conservancy districts to finance dams, tunnels, and other water works that provide water

¹Article XVI, Section 5, Colo. Const.

² *Coffin v. Left Hand Ditch Co.*, 6 Colo. 443 (1882).

³ *Metropolitan Suburban Water Users Assoc. v. Colorado River Water Consvrv. Dist.*, 148 Colo. 173, 365 P. 2d 273 (1961).

⁴ Section 37-82-106, C.R.S., and *City of Thornton v. Bijou Irrigation Co.*, 926 P.2d 1 (Colo. 1996).

for irrigation, mining, domestic, and other beneficial uses.⁵ According to the Colorado Department of Local Affairs, 52 water conservancy districts have been formed in Colorado including the Northern Colorado Water Conservancy District and the Southeastern Colorado Water Conservancy District that own and operate large transbasin diversions. State law prohibits water conservancy districts that export water from the Colorado River basin from impairing or increasing the costs for existing and prospective water users in the Colorado River basin.⁶ The law also requires that the plans of an exporting conservancy district include facilities and other means to protect current and prospective water users in the Colorado River Basin. For example, the Southeastern Colorado Water Conservancy District built the 102,369 acre-foot Ruedi Reservoir on the Fryingpan River in western Colorado to ensure that existing water rights and perspective uses of water on the western slope are not impaired by the district's export to the Arkansas River Basin. Water from the Ruedi Reservoir is used for irrigation, municipal, industrial, recreation, and fish and wildlife purposes on the western slope.

Colorado Water for the 21st Century Act. In 2005, the Colorado legislature enacted the *Colorado Water for the 21st Century Act* which established a process to address the state's growing water demand.⁷ This law created nine basin roundtables covering the:

- Denver metropolitan area;
- South Platte River Basin;
- Arkansas River Basin;
- Rio Grande River Basin;
- Gunnison River Basin;
- Colorado River Basin;
- Yampa-White River Basin;
- Dolores-San Miguel-San Juan Basins; and
- North Platte River Basin.

These roundtables are charged with identifying water needs within each basin and conducting discussions with other basins to address interbasin water issues. The law also created a 27-member Interbasin Compact Committee (IBCC) to facilitate negotiations between the roundtables. In 2006, the General Assembly approved the IBCC's charter that includes principles to guide negotiations between roundtables and defines the process for ratifying interbasin compacts. It also defines the process for integrating the interbasin compact process with other water planning and development processes, such as the Statewide Water Supply Initiative that was commissioned by the General Assembly in 2003 to explore water supply and demand issues in each of the state's eight major river basins.

Colorado River Availability Study. Since 2007, the Colorado General Assembly has appropriated \$2 million from the Colorado Water Conservation Board Construction Fund for the Colorado Water Conservation Board to evaluate water availability in the

⁵ Section 37-45-101, *et seq.*

⁶ Section 37-45-118 (1) (b) (II), C.R.S.

⁷ Section 37-75-101, C.R.S., *et seq.*

Colorado River basin and its tributaries. The study seeks to determine how much water from the Colorado River Basin System is available to meet Colorado's current and future water need. According to Senate Bill 07-122 that authorized the study, the board must work in full consultation with, and with the active involvement of the basin roundtables. The Colorado River Availability Study is also required to consider current and potential future in-basin consumptive and nonconsumptive needs. Phase I of the study will identify the current water uses in the Colorado River Basin. Phase II of the study will examine future water needs in the basin. For more information about this study, go to <http://cwcb.state.co.us/WaterInfo/CRWAS/>

State Laws that Regulate Large Transfers of Water Rights

Overview. A water right is a property interest that may be changed, amended, or transferred without losing its priority if other water rights are not injured and the change is approved by a water court judge. Currently, most of Colorado's water is used for agriculture. Agricultural water rights are also some of the most senior rights in Colorado. Consequently, the market value of this water is steadily increasing as demand for municipal water increases. Large tracts of agricultural lands have been taken out of production to provide water to Colorado's growing municipalities, especially in the lower Arkansas River basin. Permanently transferring a water right from a farm to a municipality may adversely affect local agricultural economies. Farms that have sold their water rights typically pay less property tax, employ fewer persons, and no longer purchase agricultural supplies from local businesses. Several laws have been adopted to address the impact of agricultural transfers. Following is brief summary of these laws.

Protections for other water rights. Under current law, the court is allowed to impose terms and conditions on a water rights change to protect other water rights from injury.⁸ For example, the court may require an applicant to leave part of his or her water in a stream or change the time when it is diverted to ensure that other water appropriators continue to receive their entitlement.

Regulation of other impacts. The court is also allowed to impose terms and conditions to address impacts caused by changes of agricultural water rights to other beneficial uses.⁹ For example, applicants may be required to revegetate affected agricultural lands and control noxious weeds. State law regulates transfers of more than 1,000 acre-feet of *consumptive use* of water per year (). The court may require an applicant to offset property tax revenue reductions and pay bonded indebtedness on the property that is removed from irrigation. "Consumptive-use" is the amount of water that is lost to a stream after it has been diverted and used beneficially.

prohibits significant water development activities unless the water right is the subject of an

⁸Section 37-92-305, C.R.S.

⁹Section 37-92-305 (4.5), C.R.S.

agreement or a decree containing terms and conditions designed to address the impacts of the change on the county in which the water had been used.

Defines "removal of water" as a change in the type and place of use of an absolute decreed agricultural water right from irrigated agricultural use in one county to a use not primarily related to agriculture in another county. Defines a "significant water development activity" as any removal of water that results in the transfer of more than 1,000 acre-feet of consumptive use of water per year by a single applicant.

Requires applicants for a significant water development activity to notify affected local governments, school districts, and water districts.

Authorizes water courts to impose mitigation payments upon any person who files an application for removal of water as part of a significant water development activity. Requires the board of county commissioners of the county from which water is removed to distribute any moneys collected among the entities in the county having bonded indebtedness in proportion to the percentage of their share of the total of such indebtedness.

Allows counties, alone or pursuant to an intergovernmental agreement, to levy a county sales tax, use tax, or any combination of such taxes of up to 1% for the purposes of purchasing, adjudicating changes of, leasing, using, banking, and selling water rights. Requires the ballot question for such proposed tax increases to clearly state that approval may result in a sales or use tax rate in excess of the current limitation. Requires the county to establish standards for the use of such revenues.

Regulation of water quality impacts from large water transfers. Water diversions can increase water pollution concentrations in a stream. For example, a water diversion upstream of a polluted river segment can remove water that would otherwise dilute the pollution. State law **HB 07-1132** authorizes water court judges to address decreases in water quality resulting from a change in the use of a water right that involve more than 1,000 acre-feet and that causes a violation of the water quality standards for the affected stream. The law specifies that the applicant for such a change in use is responsible for mitigating only that portion of the decline in water quality resulting from their change. When a water judge issues a decree for a change of type of use of irrigation water rights that permanently transfers more than 1,000 acre-feet of consumptive use of water per year from irrigation to another use, allows the water judge to include a term or condition that addresses decreases in water quality caused by the change if the change would cause or contribute to an exceedance of water quality standards established by the water quality control commission that are in effect at the time of the decree or, if ordered by the court, subsequently adopted by the commission prior to the entry of the decree, for the stream segment at the original point of diversion. Specifies that the applicant is responsible for only that portion of the exceedance attributable to the proposed change. Prohibits the term or condition from being inconsistent with the state clean water act or the federal law regarding water quality-impaired stream segments. Specifies that the act shall not be interpreted to confer standing on any person to assert injury who would not otherwise have such standing.

Federal Regulation of Water Projects

Federal Clean Water Act. The Federal Clean Water Act requires water developers to obtain a permit from the U.S. Environmental Protection Agency (EPA) prior to constructing a dam on a river.¹⁰ This law prohibits the agency from issuing permits for projects that will impact endangered species. In 1990, the EPA denied a permit for the proposed Two Forks Reservoir that would have stored 1.1 million acre feet of water one mile below the confluence of the main stem of the South Platte River and the North Fork of the South Platte River in southeast Jefferson County. Some of the water for this project would have been diverted from the Colorado River Basin. The permit was denied because of the project's impact on a popular trout fishery, recreational resources, and threatened and endangered species including the Pawnee Montane Skipper Butterfly and the Whooping Crane. The EPA also determined that there were less environmentally harmful water supply alternatives available. In 1996, a federal judge reaffirmed the EPA's decision to deny the permit to build Two Forks Reservoir.

Federal Wild and Scenic Act.¹¹ The Two Forks Reservoir site lies within the Pike National Forest that is managed by the U.S. Forest Service (USFS). The federal Wild and Scenic Rivers Act requires federal agencies to consider potential national wild, scenic, and recreational river areas in the planning and development of water and related resources.¹² Following the EPA's decision on the Two Forks Reservoir, the USFS conducted a review to determine whether the South Platte River corridor qualified as a wild and scenic river that warranted additional federal protections. If so, the act would prohibit the USFS and other federal agencies from issuing permits for projects that impact the river's flow, water quality, or designated "outstanding and remarkable values (ORV)." As part of its review, the USFS identified the South Platte River corridor's geology, historic cultural resources, wildlife habitat, and fishing as ORVs that deserved additional protections. It also considered alternatives for protecting the corridor including a proposal from Denver Water and other entities called the South Platte Protection Plan.

South Platte Protection Plan. In 2001, the USFS approved the South Platte Protection Plan (SPPP) to protect the river corridor from harmful land and water development as an alternative to regulation under the federal Wild and Scenic Rivers Act. The plan imposes a 20-year moratorium on the development of the Two Forks Reservoirs's right-of-way and requires that 780,000 acre feet of the reservoir's conditional water rights be relinquished and allowed to remain in the stream. It also prohibits the construction of new water storage or diversion facilities in Chesseman and Eleven Mile canyons. Water development within the corridor will only be allowed if it does not impact protected

¹⁰ 33 U.S.C. 1251, Sec. 1344

¹¹ In 2009, the General Assembly enacted Senate Bill 09-125, that created the Wild and Scenic Rivers Fund and continuously appropriated \$400,000 annually from the Colorado Water Conservation Board Construction Fund to develop protection of river-dependent resources as an alternative to wild and scenic river designation.

¹² 216 U.S.C. Sec. 1271 et seq.

resources including wildlife, fisheries, recreation, scenery, and historic resources.