

AGENDA
Special Water Committee

House Committee Room 0112
State Capitol Building

Wednesday, September 15, 1999
10:00 a.m. to 5:00 p.m.

Call to Order

I. Opening Remarks From the Chairman

II. Overview of the Denver Basin and South Platte River Basin Technical Report

- *Hal Simpson, State Engineer*

III. Summary of Water Law for the Denver Basin Aquifer and the South Platte River Basin

- *Hon. Gregory J. Hobbs, Jr., Justice, Supreme Court of Colorado*

12:00 - 1:30 Lunch Break

IV. Progress Report on the Development of the South Platte River Decision Support System

- *Peter Evans, Director, Colorado Water Conservation Board*

V. Overview of the Metropolitan Water Supply Investigation

- *Peter Evans, Director, Colorado Water Conservation Board*

VI. Update on the Three State Agreement for the Recovery of Endangered Species on the Platte River

- *Kent Holsinger, Deputy Director, Department of Natural Resources*

VII. Update on the Denver Basin Aquifer Research Well

- *Bob Reynolds, Ph.d, Research Associate, Denver Museum of Natural History*

VIII. Public Testimony

Adjourn

STAFF SUMMARY OF MEETING
COMMITTEE ON SPECIAL WATER

Date:

09/15/99

10:08 AM

Representative Hoppe, Chairman, welcomed the committee and described the purpose and activities of the Special Water Committee since its creation in 1996. Also in attendance were Ms. Allison Pasternak, Legislative Council Staff, and Ms. Pamela Cybyske, Office of Legislative Legal Services.

10:10 AM -- Overview of the Denver Basin Technical Report

Mr. Hal Simpson, State Engineer, described the South Platte River and its interaction with the Denver Basin aquifers (see attachment A). He said that pumping from the aquifers contributes approximately 35,000 acre-feet annually to the South Platte River. An acre-foot is approximately the amount of water used by a family of four in one year. He said that one of the primary purposes of the Denver Basin and South Platte River Basin Technical Study, also known as the SB 96-74 study, is to determine the impact of groundwater pumping from the Denver Basin Aquifers on the South Platte River.

Mr. Simpson said that approximately four million acre-feet of water is diverted annually from the South Platte River and that virgin flow in the river is approximately 1.4 million acre-feet of water. This means that water in the river is used approximately three times before it reaches the Nebraska state line. He said that one million acres of agriculture is irrigated by water from the South Platte River. Approximately 400,000 acre-feet of water is imported into the South Platte River Basin annually from other river basins by the Colorado Big Thompson Project, Denver Water, and other transbasin suppliers. Denver and other cities and towns in the basin use approximately 440,000 acre-feet of water annually.

10:20 AM

Mr. Simpson also described the Denver Basin Aquifer. The aquifer consists of four separate aquifers that extend approximately from Colorado Springs in the south to Greeley in the north and Denver in the west to Fort Morgan in the east. Combined, the aquifers contain approximately 300 million acre-feet of usable water. In response to questions from the committee, he explained that surplus water may be injected into the Denver Basin, called artificial groundwater recharge, and used later during water shortages. Mr. Simpson explained that the recharged water remains near an injection well. He promulgated rules to permit recharge projects in the Denver Basin aquifers. Approximately 60,000 acre-feet of water is pumped annually from the Denver Basin aquifers. Of this amount, approximately 40 percent is pumped for municipal purposes, 26 percent for domestic uses, and 20 percent for irrigation. He said that water levels in the western and more shallow part of the aquifer have declined significantly, while levels in the deeper parts have not declined as much.

Mr. Simpson also explained the legislative history of the laws regulating the allocation of Denver Basin groundwater. For example, SB 85-5 created two categories of groundwater, nontributary and not nontributary and established different requirements for mitigating pumping impacts on surface streams for each type of groundwater. Nontributary groundwater is defined as groundwater that is located outside of a designated groundwater basin that will not deplete the flow of a natural stream within one hundred years at an annual rate greater than one-tenth of one percent of the rate of withdrawal. Not nontributary groundwater is groundwater located within the Denver Basin aquifers that will, within one hundred years, deplete a stream at a rate greater than one-tenth of one percent of the annual rate of withdrawal. SB 85-5 also based ownership of these groundwaters on the ownership of overlying lands. He explained that SB 96-74 was created to address concerns from river users about the impact of post pumping depletion. Post pumping depletions occur after a groundwater user stops

pumping an aquifer and is no longer replacing his depletion. A depletion is the amount of water that is not returned to a stream system after being used due to evaporation, plant use, and other factors. Due to the geologic characteristics, post pumping depletions may not affect a river until many years after pumping has ceased.

11:00 AM

Mr. Simpson summarized the provisions of each chapter of the technical study and made policy recommendations concerning the management of the Denver Basin aquifers and the South Platte River. He recommended that additional technical studies be conducted to determine the connection between the Denver Basin aquifers and the South Platte River. This information would better enable him to determine if the current mitigation requirements for users of the aquifers are adequate to protect river users. He also recommended that the Special Water Committee hold public hearings before determining whether to allow runoff from roads, buildings and other impervious surfaces be used to mitigate the impact of groundwater use on surface streams. Before making a recommendation to the committee, Mr. Simpson said that he will receive additional testimony from water users concerning whether a de minimis standard should be established for groundwater pumping. Pumping levels that fall below this amount would not be required to replace its depletions.

11:00 AM -- Overview of Colorado Water Law

Supreme Court Justice Gregory J. Hobbes, Jr. said that the Denver Basin Aquifer system is under a unique management system that includes the regulation of nontributary and not nontributary groundwater. He explained that a recent Colorado Supreme Court decision *Park County Sportsmen's Ranch LLP v. Bargas* determined that the law regulating replacement of depletions caused by pumping of not nontributary groundwater applies only to the Denver Basin aquifer and does not apply to water that is found in similar geology elsewhere in the state (see attachment B). He explained that the Colorado Constitution established the doctrine of prior appropriation that regulates the allocation of all water from natural streams. The Groundwater Management Act establishes a different legal mechanism for allocating nontributary and other types of water that is not connected to natural streams. Persons who want their water to be allocated according to the Groundwater Management must prove that the water is not connected to a stream.

Justice Hobbes explained that the doctrine of prior appropriation regulates the allocation of water in natural streams (see attachment C). He said that this doctrine abolished in Colorado the riparian common law system that is common to wetter regions such as the eastern United States. A riparian system prohibits water uses that significantly reduce a stream flow. This prohibition would effectively eliminate most water uses in Colorado. In Colorado, water is often removed from a stream and applied to irrigation and other uses that significantly deplete stream flows. The doctrine of prior appropriation recognizes this problem and allocates a limited resource among senior water users. Water users who first used a stream for agriculture or some other beneficial use must receive their full share of water before other users may receive any water.

11:35 AM

Justice Hobbes explained the Compact Clause of the U.S. Constitution that allows Colorado to enter into formal agreements with downstream states regarding the allocation of Colorado's rivers. Interstate compacts determine the amount of water and timing of its release that must be surrendered to downstream states. Compacts regulate the allocation of water on all of Colorado's major rivers including the Colorado, South Platte, Arkansas, and Rio Grande.

Recently, the U.S. Supreme Court determined that Colorado did not provide Kansas with its full compact entitlement. He also explained the authority of the federal government to affect the allocation of Colorado's water. For example, the federal reserved water rights system allows the federal government to reserve water to supply national forests and other federal purposes. Federal permitting requirements also affect whether dams may be built within Colorado.

Justice Hobbes described the allocation of nontributary and other types of water that are not part of the natural streams. He said that the Colorado Supreme Court determined that this water is not regulated by Article XVI of the Colorado Constitution. The Court also determined that the General Assembly has greater authority to regulate the allocation of this water than it does water in natural streams. Based on this decision, the General Assembly limited the rate of pumping from these aquifers to ensure a lifespan of 100 years. It also determined that the ownership of these waters shall be based on overlying land ownership.

12:07 PM -- Lunch

01:49 PM -- Progress Report on the Development of the South Platte River Decision Support System

Mr. Peter Evans, Director, Colorado Water Conservation Board (CWCB), described the South Platte River Decision Support System (see attachment D). He explained that the system would be used to administer water rights in the South Platte River Basin. He told the committee about the value of the decision support system and the cost of its development. The Water Conservation Board is also creating a Rio Grande Decision Support System. The CWCB wants to have decision support systems for every basin that will be interconnected and accessible via the internet. Mr. Evans stated that it will take the CWCB two years to develop the support system and have it working. Currently, they have had input from all South Platte River water users. He stated that the CWCB has been using moneys from the construction fund to develop the project; however, when they're ready to begin using the support system they will need another source of funding.

02:16 PM -- Overview of the Metropolitan Water Supply Investigation

Mr. Peter Evans, Director, Colorado Water Conservation Board (CWCB), discussed the Metropolitan Water Supply Investigation. He stated that the investigation of the Denver metro area's current and future water supply was initiated by Governor Romer and the General Assembly. The former governor convened a water forum that, in turn, formed a technical advisory committee. The committee identified and reviewed four water supply options for the metro area: conjunctive use, effluent management, interruptible supply arrangements, and other system integration opportunities. Two recommendations have come from the investigation: 1) establish a state-sponsored forum, and 2) update the Metropolitan Water Supply Investigation's database.

03:23 PM -- Update on the Three State Agreement

Mr. Kent Holsinger, Assistant Director, Department of Natural Resources, explained the Three State Agreement

among

Colorado, Wyoming and Nebraska that protects four endangered species on the Platte River in Nebraska (see attachment E).

He stated that the Department has until December to decide what actions Colorado will take to meet the requirements in the Agreement.

03:41 PM -- Update on the Denver Basin Aquifer Research Well

Dr. Bob Reynolds, Research Associate, Denver Museum of Natural History, described the stratigraphy of the Denver Basin aquifer (see attachment F). He described the geologic data he has gathered from a single, 2000 ft deep core drilled in the middle of the aquifer. Dr. Reynolds thinks that his project will provide important information about the Denver Basin's water-bearing formations.

03:57 PM -- Public Testimony

Michael Woodard, representing self, stated that the town of Elizabeth has drilled a well at the edge of the town (see attachment G). His property is near the well and the well's drawdown extends under his land. Mr. Woodard is concerned that the well will negatively affect his water rights and ability to irrigate his land. He is concerned that the well's drawdown will significantly lower the water table and he will have to drill a deeper well, which he cannot afford to do.

04:14 PM -- Adjourn