DISTRICT COURT, WATER DIVISION NO. 4, COLORADO

CASE NO. 88-CW-178

APPLICATION FOR WATER RIGHTS
by
THE BOARD OF COUNTY COMMISSIONERS FOR ARAPAHOE COUNTY

for the

UNION PARK RESERVOIR PROJECT

PHASE I
on
WATER AVAILABILITY

# FINDINGS OF FACT, CONCLUSIONS OF LAW, AND JUDGMENT & DECREE

Water Judge: Robert A. Brown

Dated: April 6, 1998

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**FINDINGS, CONCLUSIONS AND DECREE ON WATER AVAILABILITY**

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CONCERNING THE APPLICATION FOR WATER RIGHTS OF:

BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF ARAPAHOE, COLORADO

IN GUNNISON COUNTY.

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## I. INTRODUCTION

### A. Introduction of Issues, Trial Data, Parties and Counsel

This Decree addresses the threshold issue of "Water Availability" with respect to an Application and an Amended Application for conditional water rights pursued by the board of county commissioners of the county of Arapahoe, Colorado ("Arapahoe" or the "Applicant") with respect to the Union Park Reservoir Project in Gunnison County, Colorado.

A lengthy trial was held from June 3, 1991 through July 3, 1991, [the "1991 trial"] which resulted in an extensive ruling from this Court dated October 21, 1991. That decision found a maximum of 20,000 acre-feet available to the Union Park Reservoir Project, and it was appealed by the Applicant to the Colorado Supreme Court ("Supreme Court"). The Supreme Court affirmed in part and reversed in part, and remanded the case for further proceedings consistent with the Opinion or for a new trial. In re Bd. of County Commissioners of the County of Arapahoe, 891 P.2d 952 (Colo. 1995) (the "1995 Opinion"). [herein this case is referred to as "Arapahoe County"] The remand resulted in extensive pre-trial motions, and the Court conducted a trial to the Court in Gunnison, Colorado from October 20, 1997, through October 30, 1997. [Said trial is referred to in this Order as the "1997 trial."] The parties filed written proposed forms of orders on December 15, 1997.

Counsel actively involved in the presentation of the case included the following:

| Party | Counsel |
|---|---|
| **Applicant:** | |
| Board of county commissioners of the county of Arapahoe [Arapahoe] | John R. Henderson and Paul J. Zilis |
| **Opposers:** | |
| City of Gunnison | Timothy J. Beaton |
| Colorado River Water Conservation District [River District] | David C. Hallford |

| | |
|---|---|
| Crystal Creek Homeowners Association, and the Cockrell Trusts [CCH] | Charles B. White |
| United States of America [USA or BUREC] | Hank Meshorer and Scott Loveless |
| Upper Gunnison River Water Conservancy District [Gunnison District] | L. Richard Bratton and John H. McClow |
| Virgil & Lee Spann Ranches | Kenneth L. Spann |
| State and Division Engineers | Steven O. Sims |

Other Opposers' counsel who were present for portions of the trial proceedings but who did not actively participate included:

| | |
|---|---|
| County of Gunnison | David Baumgarten |
| National Wildlife Federal Colo. Wildlife Federation, Gunnison Angling Society, Western Colo. Water Congress Rainbow Services, Inc. and High Country Citizens Alliance | Bruce C. Driver |
| Upper Gunnison River Water Conservancy District | Anthony Williams |

**B. Jurisdiction and Background**

1. The Application and the Amended Application in the captioned case constitute "water matters" within the exclusive jurisdiction of the Water Judge under §37-92-203(1), C.R.S. 15. Said Applications and the Amendment were duly published as required by law and this Court has jurisdiction of the subject matter of these proceedings and of all parties affected hereby, whether they have appeared or not.

2. None of the land or water rights involved herein is located within the boundaries of a designated ground water basin.

3. Statements of Opposition were timely filed by a number of Opposers, including those listed in the introduction above. Those who filed Statements of Opposition, but who did not participate in the trial, or reached stipulations with Arapahoe, include the following:

The Colorado Water Conservation Board, the Colorado Division of Wildlife, the Colorado State Board of Land Commissioners, Tri-State Generation and Transmission Association, Inc., City of Aurora, Mr. and Mrs. Charles Reeder, Wapiti Canyon Ranch, Ltd., Joe Vader, et al., Rocky Mountain Biological Laboratory, and the City of Grand Junction.

4. As an overview, the conditional water rights sought in these cases comprise a large water development known as the Union Park Reservoir Project ("Union Park"). The Project seeks the trans-mountain diversion of water by which water is taken from the Upper Gunnison River Basin located west of the Continental Divide in Gunnison County, thence moved through a tunnel to the Antero Reservoir located on Colorado's Eastern Slope in Park County, and thence into the South Platte River, to be delivered to the locations for ultimate use. The Project anticipates diverting water from the East River and the Taylor River (and certain of their respective tributaries) which two rivers join at the Town of Almont in Gunnison County, Colorado, to form the Gunnison River.

5. THE APPLICATION IN 88CW178: On December 30, 1988, Arapahoe filed an Application in Case No. 88CW178. Basically, this new Application was identical to the Application filed by Arapahoe's predecessor, the Natural Energy Resources Co., in Case No. 86-CW-226, except for the claimed priority date, the identity of the Applicant, and it described the Union-Antero Conduit as being 43.14 miles in length (rather than 41.84 miles as stated in 86CW226).

a. The primary structure is Union Park Reservoir with a capacity of 900,000 acre-feet, which would be constructed on Lottis Creek, a tributary to the Taylor River. In a prior case, Case No. 82CW340 in this Court, the Union Park Reservoir had already obtained a conditional decree for the storage of 325,000 acre-feet to be used as part of the Union Park hydroelectric project. The 900,000 acre-feet capacity contemplated by the Application in Case No. 88CW178 includes the 325,000 acre-feet capacity in 82-CW-340, less 4,450 acre-feet which had been transferred to another point of storage in Case No. 85-CW-96.

b. The sources of supply for Union Park Reservoir applied for the original Application included:

1) Lottis Creek, the creek upon which the reservoir is to be constructed;

2) Taylor Park Pumping Plant which would divert water from the Taylor River at Taylor Park Reservoir and pump it to Union Park Reservoir (for which a 1,000 c.f.s. conditional decree was requested); and

3) The Willow Creek Collection System and Bertha Gulch Tunnel which is a series of open channels and a tunnel carrying water from Bertha Gulch, three unnamed tributaries of Cow Creek and Willow Creek to Union Park Reservoir (for which 340 c.f.s was claimed). This system was dismissed in the initial trial, and Arapahoe does not seek a decree for this system in this case.

c. Another principal structure involved in the Project is the Union-Antero Conduit for which a decree for 450 c.f.s is requested. The Union-Antero Conduit is described as a series of tunnels, pipelines, siphons and flumes approximately 43.14 miles in length which is to carry the water from Union Park through the Continental

Divide to Antero Reservoir for eventual use and consumption on the eastern slope.

d. The Application lists the following claimed beneficial uses: municipal (including fire protection, irrigation of lawns, gardens and parks, and water for private and municipal facilities); domestic, commercial and industrial uses; recreational purposes; fish and wildlife propagation; reservoir evaporation replacement and hydroelectric power.

e. In addition to the conditional decree requested in Case No. 88CW178, the Application asked to change the conditional decree in Case No. 82CW340 which was adjudicated solely for power generation purposes by adding the uses of recreation, fish and wildlife propagation and evaporation replacement. This claim was denied in the initial trial, and Arapahoe does not seek a decree for this change in the current trial.

6. THE AMENDED APPLICATIONS IN CASE NO. 88CW178:

a. On November 30, 1990, the Applicant filed an Amendment to its Application in this case. The Amended Application preserved the claims for the structures applied for in said case, and requested conditional water rights at alternate points of diversion as follows:

1) Structures located in the Taylor River drainage:

-Deadman Gulch diversion structure, 40 c.f.s.,
-Spring Creek diversion structure, 225 c.f.s.,
-Taylor River diversion structure, 290 c.f.s.,
-Texas Creek diversion structure, 100 c.f.s.,
-Willow Creek diversion structure, 140 c.f.s.

2) Structures located in the East River drainage:

-East River diversion structure, 80 c.f.s,
-Copper Creek diversion structure, 40 c.f.s.,
-West Brush Creek diversion structure, 50 c.f.s.,
-Middle Brush Creek diversion structure, 65 c.f.s.,
-East Brush Creek diversion structure, 50 c.f.s.,
-Cement Creek diversion structure, 125 c.f.s.

b. On May 31, 1995, the Applicant filed another Amendment to Application to Amend its Application, and the motion was granted in this Court's Order of February 14, 1996. The amendment was based upon a stipulation between the Applicant and Rocky Mountain Biological Laboratory as a reasonable accommodation between the parties to consolidate two points of diversion (one on the East River and the other on Copper Creek), into one point of diversion, known as the "Consolidated East River Diversion Structure" for 120 c.f.s." Upon granting the amendment, the Court ordered that it would relate back to November 30, 1990, the date of the first amendment to the Application.

C. "Can and Will" Doctrine and Maximum Beneficial Use

7. In seeking an award of conditional water rights, the above Application requires analysis and application of §37-92-305(9)(b), C.R.S. 15 (1990 Repl. Vol.), which adopts a "can and will" test for the issuance of conditional water rights. The statute states:

> "No claim for a conditional water right may be recognized or a decree therefor granted except that it is established that the waters can be and will be diverted, stored, or otherwise captured, possessed, and controlled and will be beneficially used and that the project can and will be completed with diligence and within a reasonable time."

8. In the October 21, 1991, Order on the first phase of this case, this Court found that the "can and will" statute requires an applicant for a conditional decree to establish that water is available to satisfy the requested water right. In so ruling, this Court relied upon the hold of the Colorado Supreme Court in Southeastern Colorado Water Conservancy District v. City of Florence, 688 P.2d 715, 718 (Colo. 1984).

9. This position was reaffirmed in the Opinion which remanded this case for further proceedings, albeit by a four to three majority vote. Arapahoe County, 891 P.2d 952 (Colo. 1995). In its 1995 Opinion, the Supreme Court provided substantial guidance on matters of first impression and established the standards necessary for an applicant for conditional water rights to show water availability and to comply with the "can and will" statute. The standards ordered by the Supreme Court differ substantially from those established for the initial trial in this case. As a result, this Court ordered that Arapahoe was entitled to a new trial in order to have the opportunity to present evidence and supporting legal arguments to meet the established standards.

10. Maximum Beneficial Use. The Supreme Court was clear that courts should interpret applications for water rights to encourage development of Colorado's water resources. This standard of review is based upon the policy of this State to maximize the beneficial use of all of the waters of the State. Arapahoe County, 891 P.2d at 962, 965, 971. In so ruling, the Supreme Court relied upon previous decisions in Fellhauer v. People, 167 Colo. 320, 336, 447 P.2d 986, 994 (1968); State Engineer v. Castle Meadows, Inc., 956 P.2d 496, 505 (Colo. 1993); Metropolitan Suburban Water Association v. Colorado River Water Conservation District, 148 Colo. 173, 194, 365 P.2d 273, 285 (1961). In issuing this Order, the undersigned is attempting to give full recognition to this principle.

11. In Arapahoe County, the Supreme Court held that the method of analyzing water availability utilized in the initial trial to apply the "Can and Will" Doctrine was burdensome and the results were highly unreliable. 891 P.2d at 968, n.20. As guidance to this Court to determine water availability, the Supreme Court set forth several specific standards including the following:

a. A determination of water availability should be based upon river conditions existing at the time the application is filed. 891 P.2d at 957, 962, 971;

b. The relation back principle should be construed and applied in a manner which aids and encourages, rather than blocks the development and early use of the water resources of the State. 891 P.2d at 965;

c. Conditional water rights under which diversions have not been made at the time that an application for a new water right is filed should not be considered in determining water availability for that new water right. 891 P.2d at 958, 962, 970, 971; and

d. Absolute water rights should be considered only to the extent of historic use, and not on the basis of their decreed amounts. 891 P.2d at 958, 962, 969. The Supreme Court held that an applicant for a conditional water right should not be required to assume, contrary to historical practice, that every absolute decree for water rights will be exercised to divert the amount of water decreed. 891 P.2d at 969.

**D. Pre-Trial Rulings Following Remand from Supreme Court**

12. Numerous pre-trial motions were considered by this Court prior to the remand trial. As a result of the pre-trial motions, the Court entered several orders which established a framework within which evidence was to be presented regarding the modelling of water availability. Some of the significant holdings by the Court in its pre-trial orders included the following:

D.1 Order of February 14, 1996

13. The following are summary excerpts of principles adopted by the Court in its Order of February 14, 1996. The Court relies on its reasoning explained in said Order to support its adoption of these principles:

a. The Supreme Court's decisive rejection of this Court's standards for determining water availability in the initial trial was so pervasive and fundamental to the outcome of this litigation that a new trial was required. [¶ 10, p. 4][1]

b. The determination of water availability is not to be unduly burdened with complex criteria, but rather is to be based upon a fairly rudimentary analysis of existing river conditions which will encourage the development of water resources. [¶ 10(d), p. 5]

c. Modelling of water availability in this case must reflect conditions existing on the river as of the time of the filing of the

[1] Unless otherwise stated, the ¶ and page references in this section "D" on pre-trial orders are to the original order to which the text relates.

Application, and shall specifically include absolute water rights to the extent of historical diversions, and not the maximum amount for the decreed purposes. Conditional water rights shall not be considered, except to the extent that diversions have been made, or are being made, as of the time of the filing of the Application. [¶ 21, pp. 6-7]

d. The availability of water for the conditional water rights claimed in the original Application should be determined as of December 30, 1988, and the availability of water for the conditional water rights claimed in the 1990 amended Application (and as it was further amended by the 1995 amended Application) should be determined as of November 30, 1990. [¶ 29] But also see the subsequent pre-trial order of 1/21/97 which established a study period from 1976-90 for both applications. **[¶16.b on p. 10 below in this Decree]**

e. The parties are to model the Black Canyon minimum streamflow water right at 300 c.f.s., and shall treat it as a right separate from, and senior to, the Aspinall Unit's absolute water right. [¶31(b), p. 9]

f. The Supreme Court's <u>silence</u> on issues presented at trial cannot be interpreted as an affirmance or reversal of the Water Court's rulings on said issues for the 1991 trial, and the Supreme Court is free to consider those issues in the event the remand to the Water Court results in a new appeal. This Court's rulings, which were not addressed by the Supreme Court, remain the "law of the case" except to the extent that this Court reconsiders its prior rulings. [¶¶ 17-19, p.6]

D.2 <u>Pre-Trial Order of November 5, 1996, on C.R.C.P. 56(h) Motions</u>

14. The following are summary excerpts of principles adopted by the Court in its Order of November 5, 1996, on various C.R.C.P. 56(h) Motions. The Court relies on its reasoning explained in said Order to support its adoption of these principles:

a. Although certain of the Applicant's points of diversion were dismissed after the 1991 trial, the Court permitted new evidence to be presented by the parties with respect to the claimed points of diversion on East River, Copper Creek, East Brush Creek, Middle Brush Creek and West Brush Creek. However, the Willow Creek Collection System and the Bertha Gulch Tunnel remained dismissed for purposes of the remand trial. [¶ 3, p. 4]

b. The effect of senior water rights on water availability should be determined in a simple manner based upon existing state or federal gauge and diversion records. [pages 3-6]

1) As primary sources of information, the parties are expected to utilize federal and state gauge diversion records as a means of determining water availability. [¶4, p. 4]

2) Additional evidence based upon personal observations and knowledge of water users on applicable reaches of the rivers will be received to assist the Court in understanding the historic use of the water rights. [¶5, p. 4]

3) State diversion records which indicate diversions in excess of decreed amounts should be reduced to the decreed amounts in determining water availability. [Issue A.1, pages 4-5]

4)Significant ditches without diversion records should be considered in determining water availability. [Issue A.2, p.5]

5) The parties shall not be required to model the entire Gunnison Basin to show water availability. [Issue A.3, p.5]

6) Only the evidence in the existing record from the 1991 trial which is relevant to the issues to be presented at the remand trial will be considered by the Court. [Issue A.4, p.5]

¶14 c. The Aspinall Unit should be considered in the same manner as other existing water rights, except to the extent that federal legislation governing the Aspinall Unit is inconsistent with and preempts state law. [Issue B, p. 6]

1) The Findings, Conclusions and Rulings made by the Court in its 1991 Order regarding the absolute water rights of the Aspinall Unit are to remain the law of the case except as set forth below. The parties have preserved their respective rights to appeal the Court's 1991 Order regarding the federal issues.

2) The Colorado River Storage Project Act ("CRSPA") provides at 43 U.S.C. § 620(f) as follows: Subject to the provisions of the Colorado River Compact, neither the impounding nor the use of water for the generation of power and energy at the plants of the Colorado River Storage Project shall preclude or impair the appropriation of water for domestic or agricultural purposes pursuant to applicable state law. "Domestic purposes" in this provision are defined in CRSPA to include household, municipal, industrial and other like purposes. [See 43 U.S.C. § 620(o) and Article II of the Upper Colorado River Basin Compact, codified at C.R.S. § 37-62-101 (1990 and 1994 Supp.)] [Issue B.1, ¶4, p. 7]

3) The plain meaning of 43 U.S.C. § 620(f) thus requires the United States Bureau of Reclamation ("BUREC") to subordinate any call for hydropower uses to appropriations for such purposes; but the subordination contemplated by the statute has interstate application only. Therefore, BUREC may enforce its state decrees under the Colorado priority system to call its adjudicated water rights for hydropower purposes against junior water rights for domestic or agricultural purposes as defined in CRSPA. [Issue B.1, ¶¶6-8, pages 8-9]

4) However, the water rights of BUREC utilized through the Aspinall Unit are subject to the obligation to subordinate to at least 60,000 acre-feet of future upstream consumptive uses. The

question of whether or not the subordination is limited to "in-basin" uses was a question to be resolved by the Court as part of the new trial. [Issue B.1, ¶8.c(4), pages 9-10]

5) The Aspinall Unit provides a marketable yield of 240,000 acre feet for use directly or by exchange through purchase contracts pursuant to reclamation law. At the time of trial, BUREC had contracts for a total of only 78 acre-feet for municipal purposes and no contracts for irrigation water. However, this water is utilized for multiple purposes and the Applicant is precluded from asserting that the difference between the amount which is stored for those purposes and the amount under contract is available for new appropriations. This is based upon the multiple uses of water from the Aspinall Unit. The water rights for the Aspinall Unit shall not be analyzed individually. [Issue B.2, ¶¶1-6, pages 10-11]

¶14 d. The water rights for the Taylor Park Reservoir, like any other absolute water right, must be considered in light of historic diversions for decreed purposes in determining water availability for new appropriations. [Issue C, p. 11]

1) The senior decree for Taylor Park Reservoir is for irrigation purposes only. [Issue C, ¶2.a, p. 12]

2) On September 18, 1990 this Court in case 86-CW-203 awarded an additional absolute decree for 44,700 acre-feet (including 19,200 acre-feet for supplemental irrigation) and a conditional decree for 61,530 acre-feet for the refill of Taylor Park Reservoir. [Issue C, ¶2.b, p. 12]

3) Although it is unlikely, to the extent diversions were being made under the conditional portion of the Taylor Park refill right at the time of the Applicant's amended Application (on November 30, 1990), the quantity of water being diverted at that time should be considered according to the Supreme Court's opinion. [Issue C, ¶7, p. 13]

e. Arapahoe may not present evidence concerning its Taylor Park Pumping Plant. [Issue D, ¶¶1-2, p. 13]

f. Both the Crystal Creek Homeowners Association ("Crystal Creek") and Arapahoe are bound by the terms of the Stipulation incorporated into the Decree in Case No. 82CW340 for the hydroelectric power rights at Union Park. As such, CCH has no right to require that its minimum instream flow right be modeled in the quantity of 445 c.f.s. as set forth in the Decree in Case No. W-1991, because, to do so, would be inconsistent with the referenced Stipulation. [Issue Raised by Crystal Creek's Rule 56(h) Motion, ¶¶1-4, pp. 14-15.]

D.3 Pre-Trial Order of November 5, 1996, on Modelling

15. The following are summary excerpts of principles adopted by the Court in its Order of November 5, 1996, on Modelling methodologies. The

Court relies on its reasoning explained in said Order to support its adoption of these principles:

a. In determining water availability, the parties shall model "substantial water rights" which are defined as rights involving at least 10 c.f.s. for direct flow rights and at least 1,000 acre feet for storage rights. [¶ 7(d)(4), p. 4.)

b. The period of analysis shall be the 15 years of record for the 1976 to 1990 water years so as to cover the amended Applications. (Although for the rights claimed in the original Application filed in 1988, the period will be for the 13 year period for the water years of 1976 to 1988.) [¶ 7(d)(5), at p. 4.) Upon reconsideration, this ruling was revised to have one study period from 1976-90 for both applications. [**¶16.b on p. 10 below in this Decree**]

D.4 Pre-Trial Order of January 21, 1997, on Reconsideration Motion

16. The following are summary excerpts of principles adopted by the Court in its three-page Order of January 21, 1997, on a Motion for Reconsideration filed by the Opposers with respect to the Court's November 5, 1996, Orders, seeking clarification of the meaning of "Average Annual Water Usage" in modelling historic diversions, and also to clarify that a single study period (from 1976-1990) should be used in the analysis of both applications, and further, to permit evidence regarding diversions under the conditional portion of Taylor Park Reservoir's refill decree. The Court relies on its reasoning explained in said Order to support its adoption of these principles:

a. Actual historic diversions for each year of the analysis period, adjusted retroactively for changes and conditions prior to 1990, such as enlargement of the capacity of the Gunnison Tunnel, should be modeled with actual water supply conditions for each corresponding year of the analysis period. [Top of page 2.]

b. The representative period of analysis for defining long-term water supply conditions for both Applications shall be 1976 to 1990. [Bottom of p. 2.]

c. Evidence of diversions or lack of diversions under the conditional portion of the Taylor Park Reservoir refill decree during the study period shall be considered by the Court in determining water availability. [p. 3]

17. The Court hereby states that the guidelines and summaries of principles and holdings in ¶¶12-16 above are listed for convenience and illustration only and are not intended in any way to be exclusive nor to revise, restrict, expand or in any other way modify the terms and provisions of the actual orders themselves.

## E. Stipulations Following Remand

18. There were numerous stipulations entered into prior to the appeal of this case from the 1991 trial, which will not be recited herein. Since

the remand of this case, the following stipulations have been entered into between the following parties:

a. Modified stipulation dated September 2, 1997, between CCH and the USA, the Gunnison District, River District, State and Division Engineers, and Uncompahgre Valley Water Users Association ("UVWUA") regarding relative priority of instream flow rights in the Taylor River.

b. Stipulation dated September 4, 1997, deleting a disputed issue.

c. Stipulation dated October 9, 1997, between Arapahoe and the City of Gunnison regarding termination of Gunnison's option to participate in Union Park.

d. Stipulation dated October 9, 1997, between Arapahoe and City of Gunnison regarding admissibility of exhibits.

e. Stipulation dated October 17, 1997, between Arapahoe and CCH, the Gunnison District, the River District, County of Gunnison, City of Gunnison, and the USA regarding physical water availability.

f. Stipulation dated October 17, 1997, between Arapahoe and Rainbow Services, et al., regarding challenges to determinations of water availability.

g. Stipulation dated October 23, 1997, between Arapahoe and the Gunnison District, the River District, State and Division Engineers, the USA, City of Gunnison, Rainbow Services, et al., CCH and Virgil and Lee Spann Ranches, Inc. regarding admissibility of deposition testimony from J. Ronald Johnston.

h. Stipulation dated October 22, 1997, between Arapahoe and the Gunnison District, the River District, State and Division Engineers, the USA, City of Gunnison, Rainbow Services, et al., CCH and Virgil and Lee Spann Ranches, Inc. regarding admissibility of exhibits.

## F. Disputed Issues

Based upon the following Orders:
July 17, 1997 Case Management Order, at ¶ A, p. 4;
August 12, 1997 Case Management Order, at ¶ 3, p. 2;
September 2, 1997 Minute Order;
September 4, 1997 Order Adopting Stipulation.

19. The disputed issues for trial, which are answered in Section IX of this Decree (begin p. 86), were comprised of the following:

a. What volume of water is available for diversion in priority by Union Park, based upon river conditions as of the relevant dates established by this Court?

b. At what rates of flow will water be available in priority at each claimed point of diversion, based upon the study period and river conditions applicable in this case?

c. Whether Arapahoe had the right as of the relevant dates established by the Court to benefit from the United States' commitment to subordinate the Aspinall Unit direct flow and storage water rights to diversions by upstream junior water rights.

1) Whether Aspinall Unit water rights have been subordinated to trans-basin diversions which divert water out of the natural basin of the Gunnison River.

2) Whether the adjudication of water rights for the Aspinall Unit by the River District and later assignment of those rights to the United States are consistent with the purposes of Colorado River Storage Project Act [CRSPA], or the commitment of the United States to subordinate the Aspinall Unit water rights to upstream development.

3) Whether any subordination of the Aspinall Unit direct flow and storage water rights to upstream junior water rights can be implemented without a contract with the United States.

d. To what extent has the conditional water right for the second fill of Taylor Park Reservoir granted in Case No. 86CW203 been exercised prior to the relevant dates established by the Court, and to what extent was such claimed exercise of the right a condition on the river at the time Arapahoe's Applications were filed?

e. Whether the Consolidated East River point of diversion should be allowed to divert more water than would have been diverted at the original East River and Copper Creek points of diversion?

f. In determining conditions on the river as of the 1988 and 1990 dates pursuant to paragraph B.1.8.(c)(4) of the Court's November 5, 1996 Order:

1) Were there policies relating to the operation of federal facilities on these dates?;

2) What were those policies?; and

3) What is the effect or relevance of such policies, if any?

**G. <u>General Description of Gunnison Basin and Water History</u>**

20. By way of background, some understanding of the geography of the area and the history of the existing senior water rights is necessary to an understanding of this decree.

a. <u>The Gunnison River Basin</u>: The sources of water for the rights discussed in this decree are tributary to the Gunnison River which itself is a major tributary of the Colorado River. The Gunnison River joins the Colorado River (formerly known as the Grand River) at

the City of Grand Junction. The Gunnison River Basin is about 8,000 square miles. Within said Basin, the East River and the Taylor River join at the Town of Almont in Gunnison County, Colorado, to form the Gunnison River. The East River Basin comprises about 300 square miles and the Taylor River Basin contains about 500 square miles.

b. Taylor Park Reservoir/Gunnison Tunnel: Among the most senior water rights in the Gunnison River Basin are those attributed to the Uncompahgre Valley Water Users Project -- i.e., the Gunnison Tunnel and the Taylor Park Reservoir. This water development, authorized by the United States Congress in 1902, was the first Reclamation Project constructed by BUREC, and it was developed to provide irrigation water to more than 75,000 acres of land in the Uncompahgre Valley. The project includes a direct flow right in the total amount of 1,300 c.f.s. for water to be diverted directly from the Gunnison River through the Gunnison Tunnel to the Uncompahgre Valley. The tunnel was completed in 1912, and the direct flow right has a priority date of 1901. Another important feature of the Uncompahgre Project is the Taylor Park Dam and Reservoir, located on the Taylor River, about 100 miles upstream from the Gunnison Tunnel. Said reservoir was constructed in the mid-1930's to provide a supplemental supply of water for the UVWUA when water was no longer available for diversion through the Gunnison Tunnel under the direct flow right. The reservoir is decreed for 111,260 acre-feet (its capacity when it spills), and has a total capacity of 106,230 acre-feet when it is full without spilling. Said water is decreed for irrigation purposes.

c. Aspinall Unit: Another significant, although more recent, facility located on the Gunnison River is the Aspinall Unit (formerly known as the Curecanti Unit) which is comprised of three reservoirs: Blue Mesa, Morrow Point and Crystal. The construction of this Unit was conditionally authorized by Congress through the Colorado River Storage Project Act [CRSPA] which was adopted in 1956.

1) CRSPA was adopted in recognition of the need of certain Upper Basin States (Colorado, New Mexico, Utah and Wyoming, where the headwaters of the Colorado River and its tributaries arise) to provide water to Lower Basin states (Arizona, California, and Nevada) under the 1922 Colorado River Compact. [see: Title 37, Article 61 of CRS 16 (1990 Repl.Vol.)] Under the 1922 Compact, the Upper Basin states must provide 75 million acre-feet of water to the Lower Basin states in any 10 year period (or an average of 7.5 million acre-feet per year). As a result, the Upper Basin must supply about 7.5 million acre feet of water at Lee Ferry (the dividing line between the Upper and Lower Basin states) on an annual basis for the Lower Basin. Unfortunately for the Upper Basin, the allocation of water between the two basins was based upon inaccurate data which calculated that at least 15 million acre feet of water was produced in the Upper Basin states each year, but in fact the figure is closer to 13 or 14 million acre feet. [See: testimony of U.S. Senator Edwin Johnson from Colorado in Exhibit 171, pages 23-30.]

2) Given the foregoing background, the concept of constructing a series of reservoirs on the Colorado River was conceived to

store water in wet years so as to see the Upper Basin through dry years. In the CRSPA legislation, Congress authorized the construction of four Units: Glen Canyon Dam, Flaming Gorge Dam, Navajo Dam, and the Curecanti Unit (now the Aspinall Unit). The latter is located on the Gunnison River about 30 miles downstream of the City of Gunnison. Also, said legislation contemplated approval of certain "participating units."

d. Other important features entitled to the exercise of absolute water rights and impacting water availability in the Gunnison River Basin will be discussed later in this Decree.

e. The parties acknowledge that approximately 1.8 million acre feet flow out of the Gunnison River Basin annually.

## II. APPROACHES TO MODELLING AND METHODOLOGY

### A. Modelling Systems

21. Three parties presented expert testimony regarding water availability to Union Park. Arapahoe relied upon engineering analyses conducted by WRC Engineering, Inc. ("Arapahoe's Model") and presented by Alan Leak. (Exhibits R-3065A, R-3115, and related exhibits.) The Gunnison District and the River District relied upon engineering analyses conducted by Helton and Williamson, P.C. (the two districts' Model") and presented by Duane D. Helton. (Exhibits R-4162, R-4196 and related exhibits.) Crystal Creek relied upon engineering analyses conducted by Spronk Water Engineers, Inc. ("CCH's Model") and presented by Dale Book. (Exhibits R-6002, R-6023, and related exhibits.) Corrections were made in all three models, as they were being developed. However, it was agreed by all counsel to waive "timeliness objections" and to accept the revised reports, because all corrections were provided to opposing parties in a timely manner. (Case Management Order Based Upon 8/12/97 Telephone Conference, at ¶ 7.d, pp. 3-4.)

22. Each of the three models referenced above relied upon very similar spreadsheet approaches in determining water availability for Union Park. Arapahoe and the River Districts utilized Excel software and CCH utilized Lotus software. The Court finds that all three models used reliable technologies. However, as explained below, the experts utilized different legal assumptions in developing the models to ascertain water availability, and as a result the Applicant and the Opposers reached significantly different estimates as to the quantity of water available for appropriation by the Applicant for its Union Park Project.

### B. Study Period

23. Based upon this Court's pretrial Order of 1/21/97 [¶16, p. 10 above], all three experts relied upon a study period from 1976 to 1990.

### C. Physical Water Availability

24. The parties all utilized very similar approaches in determining the gross amount of water physically available. Because stream gauges

did not exist at each point of diversion contemplated by the Applicant's collection system, all of the experts found it necessary to utilize regression analyses in an attempt to predict (on the basis of known stream gauge records) the amount of water available at a given point of diversion in a given month. In fact, because the approaches provided such similar results, the parties entered into a Stipulation, dated October 17, 1997, whereby they agreed that the quantification methods and the accuracy of results obtained from said methods would not be contested by the parties in connection with the determination of water availability in this case. This Court finds that all three models are reliable in determining physical water availability.

### D. The Parties' Respective Methodologies

25. The parties complied with this Court's pretrial orders to varying degrees. Arapahoe's model was generally consistent with the pretrial orders, except that its expert made some improper assumptions with respect to "by-passes" and "optimum flows" in modelling the Taylor Park Reservoir storage rights. [**See ¶¶39-40 below**] The Districts' model and Crystal Creek's model did not fully comply with the Court's orders either. Specifically they did not model all significant absolute water rights nor did they properly modify the diversion records for the Gunnison Tunnel to reflect the amount of water which was physically capable of being diverted in 1990. However, the omissions by the Opposers' experts tended to work to the benefit of Arapahoe in ascertaining water availability. Further, the districts' experts made no effort to quantify the rates of flow available at Arapahoe's claimed diversion points.

26. All three experts agreed that the **two most important assumptions** in determining water availability concern:

a. the subordination of the Aspinall Unit water rights to junior upstream water rights and

b. the manner in which the Taylor Park Reservoir refill water right decreed in Case No. 86CW203 is modelled.

27. The experts for the Opposers imposed certain constraints for the Aspinall Unit and for the Taylor Park Reservoir which Arapahoe did not impose. In the absence of the constraints modelled by the Opposers, the results in all three modelling approaches would be very consistent.

a. Arapahoe's model provides that there are approximately 128,500 acre-feet available for diversion without the constraints used by the Opposers' experts. [see: Exhibit R-3119, lines 112, 135 and 174]

b. Crystal Creek's model provides that there are approximately 117,844 acre-feet available for diversion without the constraints referenced above. (Exhibit R-6013, row 145, and Exhibit R-6024.) The River Districts' model is more difficult to directly compare with Arapahoe's modelling without the Taylor Park and Aspinall constraints. However, the River Districts' model showed potential diversions averaging 123,089 acre-feet, and minimum and maximum potential diversions of 20,486 acre-feet to 226,098 acre-feet without the Aspinall and Taylor Park constraints which Mr. Helton utilized.

(see: Exhibit R-4205, Appendix C, Column T). Arapahoe demonstrated that the maximum potential diversions under the River Districts' model compared very closely with Arapahoe's diversions under Scenario 2,, (Exhibit R-3164).

## III. IDENTIFICATION OF WITNESSES AT 1997 TRIAL

28. Before analyzing evidence presented in this case and as an introduction for the citations to transcripts of the testimony, the Court believes it will aid the reader's comprehension of this Decree for the Court to identify each witness whose testimony is referenced in the balance of this Decree.

29. Therefore, the Court hereby lists the trial witnesses by name, title, and brief qualifications, based upon the following:

a. the "Engineering" witnesses (who are cited primarily in the section dealing with the analysis of the Taylor Park Reservoir Storage Rights and the "Subordination" witnesses (who are cited primarily in the sections relating to the BUREC's subordination policy).

b. The citation for each witnesses' testimony will include: his/her name, the trial day when the testimony was given, and the page(s) in that day's transcript where the testimony is to be found.

### A. Engineering Witnesses

1) Arapahoe's expert: **Alan J. Leak** - B.S. in civil engineering from Colorado State University (1981). Registered Professional Engineer in Colorado and Nevada. Water resource engineer with WRC Engineering (1981-present). He has held several positions as project engineer and project manager. His expertise is in water resources engineering, including hydrology, with some expertise in computer analysis and computer modelling. He testified at both the 1991 and the 1997 trials; and other expert witness experience. [Resume: Exhibit 3068]

2) Arapahoe expert on reliability of Arapahoe's model: **Bruce A. Curtis** - B.S. in civil engineering from University of Illinois (1979); M.S. and Ph.D. in civil engineering from University of Nebraska (1988 & 1992). Registered Professional Engineer in Illinois. He has held several positions as project manager and project engineer. His expertise is in water balance models, hydrologic and hydraulic modeling. [Resume: Exhibit 3069] [Also see Curtis, 10/20/97 Transcript, p. 163]

3) Expert for both River District and Gunnison District: **Duane D. Helton** - B.S. from Colorado State University (1964) in civil engineering; M.S. from University of Colorado (1972) in water resources engineering. Registered Professional Engineer. President of Helton & Williamsen, P.C. since 1993; has prior experience with other engineering firms 1980-1992. His expertise is in water resources engineering, water rights engineering and hydrology. He testified at both the 1991 and the 1997 trials, and has been an

expert witness in other cases, including the U.S. Supreme Court cases of Kansas v. Colorado (as an expert for Colorado) and Nebraska v. Wyoming. He was the Chief of Hydrologic and Water Quality Section for the Colorado Water Conservation Board in Denver from 1969-80. [Resume: Exhibit 4203]

4) Expert for Crystal Creek Homeowners and Cockrell Trusts: **Dale E. Book** - B.S. from University of Illinois (1976) in civil engineering; M.S. from Colorado State University (1980) in civil engineering, with specialty in water resources planning and management. Professional Engineer. President of Spronk Water Engineers, Inc. (has been with said company from 1984 to present). His expertise is in water rights engineering, water resources engineering and hydrology. He did not testify at the 1991 trial, but Brent Spronk (who was then president of Spronk Water Engineers) testified at said trial - however, Mr. Spronk died 6/1/96, whereupon Mr. Book assumed the presidency of Spronk Water Engineers. While he worked closely with Mr. Spronk in preparation for the 1991 trial, it was not until January 1997, that he became directly involved in this litigation. He has been an expert witness in other cases, including the U. S. Supreme Court cases of Kansas v. Colorado (as an expert for Kansas) and Texas v. New Mexico. [Resume: Exhibit 6001]

¶29 **B. Subordination Policy Witnesses**

1) **Dr. Jeris Danielson** - State Engineer from 1979-1992. He first began work with the Office of the State Engineer in 1970 as Chief of Planning for the Division of Water Resources; then was appointed to be Deputy State Engineer in 1975; was appointed State Engineer by Governor Lamm in 1979, and "unappointed" by Governor Romer in 1992. [No other evidence was presented or deemed necessary to establish Dr. Danielson's knowledge and experience to testify on the issues he addressed.]

2) **Mr. Wayne Cook [by deposition]** - He served with the BUREC for 30 years, starting in the Weber Basin Project Office in Ogden, Utah, from 1960-65; then he was with the Central Utah Project in Provo, Utah, from 1965-1971; then to the BUREC Hydrology Branch in Durango (serving as planning officer and then senior staff officer) from 1971 to 1978; then he became Regional Supervisor of the Water and Land Division in Salt Lake City, which was his position when he gave his deposition in 1990; then he retired later in 1990. Now, in 1997, he serves as Executive Director of the Upper Colorado River Commission (but he did not testify from that role).

3) **Ms. Carol DeAngelis** - the Area Manager of the Western Colorado Area Office of the BUREC (1994-present). She holds a B.S. in civil engineering, and upon graduation in 1978 she began work with the BUREC. She started in the Division of Dam Design in Denver; then in 1982 she moved into the Dam Safety Inspections Branch in Denver (which position covered 17 states) until 1985; then to the Operation and Maintenance Branch in Denver; and then in April 1990 she moved to Salt Lake City and became Assistant Regional Supervisor for Water and Land for the Upper Colorado Region (as an assistant to Mr. Wayne

Cook), and then upon Mr. Cook's retirement she became the Acting Regional Supervisor of Water and Land in 1990, and was then appointed the Regional Supervisor in January 1991; subject to the direction of the Regional Director in the Salt Lake Office who in turn is responsible to the Commissioner in Washington D.C.

4) **Mr. James S. Lochhead** - Executive Director of the Colorado Department of Natural Resources (1994-present); law degree in 1978, practiced with a specialty in water law from 1978 to ; member of the CWCB since 1983; Colorado Commissioner on the Upper Colorado River Compact Commission (1987-present); Governor Romer's representative on a BUREC seven-basin state task force organized to provide input to and work with the BUREC in devising annual operating plans for the Colorado River System reservoirs; and a special commissioner for Colorado on Colorado River issues generally, and lead negotiator for Colorado on issues relating to California's use of water. He has represented clients, testified before congress, published papers and lectured frequently on issues involving the development of water resources on the Colorado River and its tributaries, trans-basin diversion issues, and policies governing the administration of the Colorado River.

¶29 5) **Mr. Harold (Hal) Simpson** - Colorado State Engineer (1992-present). M.S. in civil engineering (water resources); Professional Engineer in Colorado. After brief experience as a water resources engineer in the private sector, he began work for the Colorado Division of Water Resources (Land Use Branch) in December 1972; appointed as Assistant State Engineer in 1981 and as Deputy State Engineer in 1988. Presently active in working with the Gunnison District, the River District and the BUREC to establish a concept to utilize the Aspinall water rights in a plan of augmentation for the Upper Gunnison Basin. He serves as Colorado's representative on the engineering committee for the Upper Colorado River Compact Commission. He is authorized to speak about the policies of the state of Colorado with respect to the Colorado River.

6) **Mr. Ken Knox** - Division Engineer for Water Division No. 4 (1994 to present). He served as Assistant Division Engineer for Water Division No. 4 from March 1990 to present. Has experience in general water administration, water resource engineering, ground water engineering principles.

## IV. ANALYSIS OF TAYLOR PARK RESERVOIR STORAGE RIGHTS

30. As stated in **¶27 above**, the parties differ as to the assumptions for modelling two senior water rights which govern the availability of water for Arapahoe's Union Park Project in this case. The Court now turns to the parties' analysis of the first of these two issues: the Taylor Park Reservoir rights.

### A. Taylor Park Reservoir Storage Rights

31. As noted earlier (**¶20.b above**) the Taylor Park Reservoir was constructed as a Reclamation Project in the late 1930's, and in 1941 its

1904 conditional decree to store water for irrigation purposes was made absolute. In the 1970's, following construction of the three reservoirs comprising the Aspinall Unit, certain Agreements were made to coordinate releases and exchanges of water between the two federally owned reservoir systems, and these agreements led to a 1990 decree in case 86CW203 which adjudicated the operational release procedures contemplated by the Agreements. Thus, as of November 1990, the date of the filing of Arapahoe's amended application in this case (88CW178), the following water rights and conditions existed with respect to the Taylor Park Reservoir:

a. First Fill (1941 Decree): A very senior "first fill" right for an active capacity of 106,230 acre-feet annually decreed absolute in 1941 with a priority date of 1904. This right is decreed for irrigation purposes only (except for four acre-feet decreed in 1986 for hydro-electric purposes). This water right was held by the United States and used by the UVWUA for delivery through the Gunnison Tunnel for irrigation of lands in the Uncompahgre Valley when the Tunnel's direct flow right from the Gunnison River was otherwise insufficient. [Exhibit 1105, Tab 8, p. 278]

¶31 b. The "1972 and 1975 Agreements": After completion of the Blue Mesa Reservoir (in 1965-66) and of the Morrow Point Reservoir (in 1968-70) of the Curecanti [Aspinall] Unit, the United States Bureau of Reclamation [BUREC] as the owner of both the Taylor Park Reservoir and the Blue Mesa Reservoir entered into an Exchange Agreement in 1972 with the Uncompahgre Valley Water Users Association [UVWUA] as the user of the Taylor Park Reservoir.

1) The purpose of the 1972 Agreement was to coordinate releases and exchanges of water between the two reservoir systems to stabilize the flow of water in the Taylor River and the Gunnison River as they run from Taylor Park to Blue Mesa.

2) In 1975 a new contract, known as the "Taylor Park Reservoir Operation and Storage Exchange Agreement" [the "1975 Agreement"] (executed 8/28/75) superseded the 1972 Agreement. Under the new agreement, the United States and UVWUA agreed to limited participation by the Gunnison District and the River District in administrative decisions regarding the exchange and release of water for the beneficial purposes of fishery, recreation and supplemental irrigation. The Gunnison District was also granted authority to apply for decrees for water rights for these purposes. [Exhibit 4180]

c. The "1990 Agreement": The four parties to the 1975 Agreement, supplemented it with an agreement on April 16, 1990, which recognized that the Gunnison District had applied for decrees for water rights pursuant to the 1975 Agreement. It provided that within 60 days after any decree in the Taylor Park Reservoir held by the Gunnison District became final, the District would assign it to the United States. Further it required that each year, any water belonging to the Gunnison District in storage at Taylor Park Reservoir on the "year end administration date" shall become the water of the United States. [Exhibit 4181]

¶31 d. Second Fill: Acting on the basis of the 1975 Agreement the Gunnison District made application for water rights in two cases 86CW202 and 86CW203 in this Court in 1986.

1) The application in 86CW202 sought to add beneficial uses for fishery and recreation to the Taylor Park Reservoir's first fill 1941 irrigation decree. This application was denied.

2) In case 86CW203 the Gunnison District applied for a "second fill" right in the Taylor Park Reservoir for 106,230 acre-feet annually, for irrigation, fishery and recreational purposes to be utilized by the Gunnison District. This application was granted on September 18, 1990, with decrees entering for 44,700 acre-feet absolute, and 61,530 acre-feet conditional. The Court also made absolute 19,200 acre-feet for supplemental irrigation, as part of the absolute decree for 44,700 acre-feet. Eleven accounting conditions were incorporated into the 86CW203 Decree to govern the operation of the exchanges and releases contemplated by the 1975 Agreement.

3) Arapahoe opposed the Gunnison District's applications in both 86CW202 and 86CW203. The Gunnison District appealed the denial of the application in 86CW202 and Arapahoe appealed the granting of the application in 86CW203. The Colorado Supreme Court affirmed both decisions. In the Matter of the Application for Water Rights of the Upper Gunnison River Water Conservancy District, 838 P.2d 840 (Colo. 1992). [Herein referred to as the Gunnison District 202/203]

e. Gunnison District 202/203: The arguments presented by Arapahoe and the holdings of the Supreme Court in the appeal of 86CW203 are material to this Court's interpretation of the modelling assumptions in the present litigation (88CW178):

1) While based on several grounds, a primary focus of Arapahoe's appeal was its assertion that this Court adopted an invalid accounting system to regulate the 86CW203 Decree. The asserted deficiencies included: use of an improper administration date, improperly credited "pass through" water to storage, and minimizing storage under the UVWUA's first fill right while maximizing the District's second fill right. In its opening and reply briefs the District vigorously argued that the accounting conditions improperly permitted expansion of the use of the 1941 Decree beyond its irrigation purpose. Arapahoe asserted that historically, of first fill's total decree for 106,230 acre-feet, only 17,360 acre-feet[2] on an average annual basis was being applied to irrigation use. [Exhibits 6020 and 6021]

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[2] Based on study periods from 1939-66 and 1976-88. [See foot-notes 11 and 12 of Arapahoe's Opening Appellate Brief in Colorado Supreme Court Case No. 90-SA-498 (reference trial court cases 86CW 202 and 86CW203).] [Exhibit 6020 in this litigation, 88-CW-178.]

2) In its affirmance of the 86CW203 decree, the Supreme Court upheld the accounting conditions specifically. It ruled that the administrative date of November 1 was appropriate to regulate and account for the annual filling of each storage right. Further it expressly held that the accounting system does not improperly permit the crediting of "by-pass" flows to the first fill nor does the decree impermissibly grant an instream flow right to the Gunnison District. By inference, if not expressly, the Supreme Court rejected Arapahoe's "expanded use" theory. Gunnison District 202/203 838 P.2d 840, 851-853.

**B. Arapahoe's Modelling of Taylor Park Reservoir Rights**

32. Mr. Leak's Reports [including Exhibits **3065 and 3065A**] extensively describe his analysis and the constraints he considered in reaching his opinions regarding water availability for the Union Park Project. Having modelled six scenarios, Mr. Leak concluded in his revised report of 4/3/97 that the average annual yield for the Project would be between 103,086 acre-feet and 113,095 acre-feet of water each year. [Exhibit **3065A**, Table V-1]. In modelling the Taylor Park Reservoir, the Court finds that Mr. Leak used the following assumptions:

a. In modeling the Taylor Park Reservoir 1941 first fill decree, Mr. Leak sought to apply Arapahoe's "expanded use" theory referred to in **¶31.e** above, which was not accepted by the Supreme Court in the Gunnison District 202/203 appeal. This constraint is discussed below.

b. Mr. Leak assumed that when this Court granted the 1990 decree in 86CW203 for the second fill right, it adopted an analysis by Duane Helton, the Districts' expert in the present case, to quantify the decree.[3] Mr. Leak testified that in this case (88CW178) he modelled the second fill right in the same manner that Mr. Helton used for the 86CW203 case. Using a historical approach, Mr. Leak concluded that on an annual average only 17,229 acre-feet of the absolute portion of the second fill right was used for second fill purposes.

c. Mr. Leak concludes that all water in excess of the limited amounts he found for the first and second fills is available for the Union Park Project. In this regard he assumed that the subordination by the BUREC for the Aspinall Unit (analyzed later in this Decree) was fully available to Arapahoe.

33. Because Arapahoe relied so vigorously during the 1997 trial (both in examination of Mr. Leak and cross-examination of the Opposers' experts), the Court will address Arapahoe's position that modelling of

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[3] At the 1990 trial for case 86CW203, Mr. Helton's own computation to quantify the absolute portion of the second fill storage right was 43,800+ acre-feet, but this Court did not rely on that approach. Rather, it relied on separate records kept by the BUREC which adopted a slightly higher amount of 44,700 acre-feet to quantify the absolute portion of that storage right. [See: ¶43 on page 13 of the 9/18/90 Decree in case 86CW203; and Exhibit 382 referenced there.]

the 1941 first fill decree must be limited to its irrigation use, and to the extent reservoir releases are made beyond the amount of said use, they cannot be considered a constraint against water availability for the Union Park Project.

a. Applying this approach Mr. Leak concluded that only 21,831 acre-feet (out of a total of 106,230 acre-feet) of 1941 first fill water was applied to irrigation use as an average annual basis over the 15-year study period. [¶117 of Arapahoe's Proposed Decree submitted December 15, 1997] Mr. Leak's computations were based upon deducting the average annual Gunnison Tunnel diversions (when the Tunnel's direct flow right was not sufficient) from average annual Taylor Park Reservoir first fill releases (which he found to be less than the full 106,230 acre-feet of the 1941 decree) and arriving at a net amount figure of water available for the Union Park Project. Applying this formula to the data available in Mr. Leak's revised modelling, the Court finds that about 31,159[4] acre-feet of water from this source alone would be available to Union Park (if Arapahoe is eligible to benefit from the BUREC's subordination). [Exhibit 3119: {line 187 for reservoir releases and line 172 for Gunnison Tunnel diversions, averaged over the 15-year study period.}]

b. During closing argument and in their proposed Decree, Arapahoe's counsel urge the Court to utilize similar data taken from the modelling by Opposers' experts, because said analysis would result in an even higher quantity of water available. for the Court to adopt, Arapahoe. The results are as follows:

1) 47,288[5] acre-feet [per Helton: Exhibit 3109, Table 3, Col 2 and Exhibit 3167, summarizing figures from Helton Appendix E, Scenario 1a.]

2) 49,563[6] acre-feet [per Book: Exhibit 6023, Table 3].

c. On its face this approach appears to have merit, but it fails to fully apply the accounting conditions which govern the operation of the UVWUA's 1941 first fill right, and it flies in the face of the Supreme Court's decision in Gunnison District 202/203 which refused to accept identical arguments made by Arapahoe in its appeal. As a result, the Court concludes that it must not rely upon Arapahoe's modelling of the first fill right.

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[4] reservoir releases of 52,406 acre-feet less Tunnel diversions of 20,247 acre-feet equals 31,159 acre-feet for Union Park

[5] reservoir releases of 69,119 acre-feet less Tunnel diversions of 21,831, equals 47,288 acre-feet available for Union Park

[6] reservoir releases of 70,157 acre-feet less Tunnel diversions of 20,594 acre-feet equals 49,563 acre-feet for Union Park

C. Opposers' Modelling of Taylor Park Reservoir Rights

34. The testimony and reports of Mr. Helton and Mr. Book regarding the availability of water for the Union Park Project demonstrate yields of less than 20,000 acre-feet. Mr. Helton's analysis supports an average annual yield for the Union Park Project between 9,000 and 12,000 acre-feet, without considering Arapahoe's own estimate of some 3,000 acre-feet in evaporation loss. [Exhibit **4205**] [Helton, 10/27/97 (morning), Transcript pp. 87-90] Mr. Book's modelling analysis of 8/11/97 demonstrates an average annual yield of about 17,689 acre-feet over the study period after accounting for evaporation and releases from Union Park for instream flow rights. Of the 180 months in the study period, Mr. Book's analysis showed only 14 months when there was a positive yield for Union Park to rely on. [Exhibit **6023**, Tables 5 & 6] [Book, 10/28/97, Transcript, p.164-167]

35. The Opposers' two experts, Mr. Helton and Mr. Book, working independently for the most part used somewhat different approaches in their analysis of water availability; but in those analyses they did blend some similar assumptions, and the Court finds that for the most part (although not entirely) these assumptions were consistent with the Accounting Conditions incorporated in the Decree in case 86CW203.

36. Although it will not attempt to list all similarities, the Court finds that both of the Opposers' experts adhered to the accounting conditions incorporated in the Decree for 86CW203. [Book, 10/28/97, Transcript, pp. 140-145] [Helton, 10/27/97 (morning), Transcript p. 34-42] In this regard, the Court finds the following examples of compliance with said conditions:

a. Both experts tracked most of the accounting conditions in case 86CW203, and did not try, as Mr. Leak did, to emulate the "physical accrual" analysis which Mr. Helton had used in that case to establish the amount of the water right entitled to an absolute decree.[7] This approach resulted in substantially more water being allocated to the second fill right than would be had the analysis been limited to Mr. Helton's "physical accrual" approach in the 86CW203 case. [Helton, 10/27/ 97 (morning), Transcript p. 44] In this regard, Mr. Book determined an annual average of 91,739 acre-feet stored under the second fill during the 15-year study period. [Exhibit 6023, Table 3 -Revised]

b. Both also took the position that both storage rights had to be fully exercised or satisfied before upstream diversions could become available for Union Park.

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[7] Mr. Helton's own computation to quantify the absolute portion of the second fill water right was 43,800+ acre-feet, but this Court, in reliance on separate records kept by the BUREC adopted a slightly higher amount of 44,700 acre-feet for the absolute portion of that storage right. [See: ¶43 on page 13 of the 9/18/90 Decree in case 86CW203; and Exhibit 382 referenced there.]

c. Both experts charged inflows at Taylor Park Reservoir, first to the first fill and after it is satisfied, then to the second fill; and they properly converted the Gunnison District's second fill water to the UVWUA's first fill water as of November 1 up to the decreed limit of the first fill. [86CW203 Decree, Accounting Conditions #4, #5 & #7] The practical effect of the conversion of second fill water was that the first fill was fully satisfied on November 1 in most years, so that it imposed no further demand on the river that year. [Book's 5/29/97 Report, Exhibit 6002, p. 10]

C.1 Mr. Helton's Analysis

37. Mr. Helton's analysis of the Taylor Park Reservoir storage rights was developed through the use of two different methods: a historical yield approach (which essentially relied on "rigorous administration") and a modelling approach. [Helton, 10/27/97 (morning), Transcript p. 52 and 59; Exhibit 4205]

a. As noted above in **¶36.a**, for his analysis in the present case (88CW178), Mr. Helton did not utilize the "physical accrual" analysis which he had used at the 1990 trial in 86CW203. He explained that his "accrual" approach in the 86CW203 case involved factoring in only "physical storage accruals" to determine the absolute portion of the second fill right, when in fact he should also have considered the "storage accruals and credit water at Blue Mesa Reservoir." [Helton, 10/27/97 (afternoon), Transcript p. 7]

b. Mr. Helton also recognized in his analysis that the first water available in priority, after the first fill for Taylor Park Reservoir is satisfied, will either be charged to the reservoir's second fill or to the Aspinall Unit storage, depending upon the relative priorities of those respective rights. [Mr. Book took a similar approach: Exhibit 6002, p. 10]

c. In his modelling, Mr. Helton established three "switches" to demonstrate what yields would be realized based upon different operating conditions. [Helton, 10/27/97 (morning), Transcript p. 82-84]

1) The different operating conditions included modelling the second fill at the limit of either its absolute right (44,700 acre-feet) or its total capacity (106,230 acre-feet); allowing or not allowing diversions on the East River after July 1 each year; and whether to treat Aspinall's storage rights as senior to the Taylor Park Reservoir's second fill right or to treat said second fill as senior to Aspinall (based upon the BUREC's subordination which is addressed later in this Decree).

2) Scenario 3b (which assumed the second fill at 44,700 acre-feet, no call by East River rights, that the second fill would be senior to Aspinall Unit, and the deduction of Union Park Reservoir releases for instream flows) established the highest average annual yield for the Union Park Project at 11,706 acre-feet per year. [Exhibit 4205, Table 10] If the obligation for Union Park to release for instream flows is eliminated, then the highest

average annual yield for the Project increases to 23,946 acre-feet. [Exhibit 4205, Table 11]

d. In his analysis of the first fill right, Mr. Helton attributed significantly more reservoir release water to the first fill as a constraint against Arapahoe's Union Park Project than was diverted for irrigation purposes through the Gunnison Tunnel. The Court has already noted that Arapahoe relies on this variance as a basis for rejecting Mr. Helton's analysis. However, in addition to the fact that Arapahoe's position is without merit because it was not accepted by the Supreme Court in the Gunnison District 202/203 appeal, the Court finds that Mr. Helton has properly represented the operation of the Taylor Park Reservoir as contemplated by the 1975 Agreement and has applied the Accounting Conditions in 86CW203 to the extent they govern the storage rights for the Reservoir. [**Historical Analysis:** Helton, 10/27/97 (morning), Transcript p. 34-42, Exhibit 4207, and Exhibit 4205: Table 2 on p. 24 and last page of Appendix A, p. 41)]

e. Generally, the Court understands the Opposers' position to be that Mr. Helton relied on the Accounting Conditions in 86CW203 as directed by the Court in its pre-trial orders; and that in so doing his analysis did not put an increased draft on the stream because the conditions are designed to protect the stream against any enlargement of use by the UVWUA. [Helton, 10/27/97 (afternoon), Transcript pp. 34-35]

C.2 Mr. Book's Analysis

38. Mr. Book's analysis of the Taylor Park Reservoir storage rights was based upon a methodology "between the two approaches" of Mr. Helton, in that relied more on the historical operation of the reservoirs and included more constraints on availability than did Mr. Helton, but he did not "re-operate" the reservoirs in the Taylor Park Reservoir in the event of diversions by Union Park, as Mr. Helton attempted to do. [Book, 10/28/97, Transcript, pp. 111, 125, 169-170]

a. Mr. Book testified that he did not limit the second fill right to its absolute decree, but rather, based upon an historical analysis of the second fill right, he concluded that it should be modelled up to its full water right limit of 106,320 acre-feet. He testified further that ¶5 of the Accounting Conditions requires accruals under the second fill right to be accounted for, and all inflows at the Taylor Park Reservoir as described in said ¶5 represent a constraint against diversions by the Union Park Project. [Book, 10/28/97, Transcript, pp. 145-146]

b. On cross-examination Mr. Book testified to the rationale for the difference between the accrual method referred to in ¶42 of the 86CW203 Decree and the accounting procedures required under the conditions attached to the Decree -- the former being to quantify the absolute portion of the water right, and the latter being for administration of the Decree. [Book, 10/28/97, Transcript, pp. 226-227]

c. Mr. Book acknowledged during his testimony that he did not model the optimum flows in ¶22 of the 86CW203 Decree. Instead he considered the historic exercise of selected water rights in the basin (including 86CW203) and relied on historical stream flows which were derived from the outflows from the reservoir; and used the stipulation in 82CW340 to determine what the demand was in the river. [Book, 10/28/97, Transcript, pp. 232-233]

d. Mr. Book testified that the difference between the reservoir releases which average 70,157 acre-feet and the diversions of 20,594 acre-feet through the Gunnison Tunnel for irrigation equals 49,550 acre-feet which at year end is transferred to the Aspinall Unit for use as part of its decreed purposes and is no longer with the UVWUA's account. [Book, 10/28/97, Transcript, pp. 237-239] He bases this modelling on two points:

1) First, that it's the natural result of the transfer that is required in Taylor Park Reservoir. The accounting conditions mandate that October 31 the second fill water must be transferred to the first fill, and to the extent that causes the first fill to exceed its decreed capacity of 106,230, the excess must be transferred to the Aspinall Unit. [Id. 234]

2) Second, that the 86CW203 Decree adopted the operations which had occurred under the 1975 Agreement, and the procedure which he modelled followed under the 1975 Agreement. [Id. 234-5]

e. The Court also finds that Mr. Book's modelling was consistent with the way Mr. Knox accounted for the second fill right. [Book, 10/28/97, Transcript, p. 147]

**D. Deficiencies in Modelling Analysis**

39. Based upon the evidence, including testimony of Mr. Leak, Mr. Helton and Mr. Book, and their respective reports, the Court finds that each expert deviated in some respects from the Court's pre-trial orders regarding modelling, and in other ways made incorrect assumptions in his modelling concepts. [See Exhibits: Leak [3065, 3065A, 3115]; Helton [4205] and Book [6002, 6023]. In this regard, however, the Court makes the following findings and concludes that Mr. Leak's omissions are more significant than the deficiencies in the analysis of the Opposers' experts:

a. Mr. Leak did not follow the accounting conditions in the Gunnison District's second fill Decree (case 86-CW-203). For example he did not cancel the Gunnison District's second fill storage account as of October 31 and did not charge said amount to the UVWUA first fill right on November 1 as required by said accounting conditions. [Book, 10/28/97, Transcript, pp. 174-175]

b. The Court finds that Mr. Leak's conclusion that an annual average of only 17,229 acre-feet were used under the second fill substantially understates the amount used for the multiple purposes of the second fill right. Further, in its earlier findings, the Court has recognized that in analyzing water availability in this

case it is not appropriate to limit the analysis to the "physical accrual" method which Mr. Helton used in the 1990 trial in case 86CW203. Mr. Leak relied on this approach and in good faith tried to apply it here, rather than strictly adhering to the Accounting Conditions as they regulate the second fill in case 86CW203. However, the Court accepts Mr. Helton's testimony to the effect that Mr. Leak failed to model the second fill right either in conformity with Mr. Helton's methodology used for the trial in case 86CW203, or in conformity with the accounting conditions in the 86CW203 Decree. Rather, Mr. Helton observed that Mr. Leak mixed elements of each approach and arrived at an unreliable result. [Helton, 10/27/97 (afternoon), Transcript pp. 8-13]

c. Mr. Leak did not properly model by-pass flows by charging them first to the first fill right.

d. Neither Mr. Leak nor the Opposers' experts strictly maintained historic releases up to the optimum flow rates required in the 86CW203 decree; and the failure to do so overstates the amount of water available for Union Park.

e. The Court recognizes that in preparing for the 1997 trial, Mr. Helton relied on certain assumptions to model water availability which varied from his analysis for the 1991 trial. The Court finds that these differences can be explained in part due to the modified principles for determining water availability which the Supreme Court required in its remand opinion. Further, the Court finds the results from the two analyses to be sufficiently similar so that the variances should not affect his credibility. [Helton, 10/27/97 (afternoon), Transcript p. 4]

**E. Impact of the BUREC's Subordination Policy**

40. The most significant difference between the modelling assumptions of the two sides in this case is their treatment of the BUREC's subordination of its senior rights in the Aspinall Unit. Whether or not the Aspinall Unit represents a constraint against water availability is actually the key to this case.

a. The Opposers' experts recognize that the BUREC has a subordination policy which would permit depletion allowances upstream of the Aspinall Unit in the amount of 60,000 acre-feet (40,000 acre-feet above Blue Mesa Reservoir), but they have assumed that said subordination is only available for use and development in-basin, and thus they have found the Aspinall Unit rights to be a significant (and decisive) constraint against water being available for the Union Park Project.

b. Mr. Leak assumed that Arapahoe may rely on the BUREC's subordination policy on the grounds that it is available to all junior water users above the Aspinall Unit, including trans-basin diverters; and further, he assumed that the amount of the subordination is not limited to 60,000 acre-feet (or 40,000 acre-feet) above Blue Mesa.

c. For reasons stated in the balance of this Decree, the Court finds that the subordination is limited to benefit only junior water appropriators who intend to develop water within the Upper Gunnison River Basin above the Aspinall Unit, and thus the subordination policy cannot be relied upon by Arapahoe to establish water availability for its Union Park Project.

d. Mr. Leak acknowledged in his testimony during the 1997 trial that if Arapahoe cannot benefit from the BUREC's subordination policy then there is not sufficient water available for the Union Park Project. In this regard he noted that without the benefit of the subordination, the Aspinall Unit's senior rights can call out the junior rights of the Union Park Project, even if he is correct as to all of the other assumptions supporting his modelling analysis (including his interpretation of the accounting conditions under 86CW203). [Leak, 10/22/97 Transcript, pp. 51-52, 61]

**F. Conclusions Regarding Taylor Park Reservoir Analysis**

41. Given the foregoing findings and conclusions, the Court concludes by a preponderance of the evidence that the analyses of the Taylor Park Reservoir storage rights by the Opposers' experts are more reliable than the analysis by Arapahoe's expert for the following reasons:

a. The Opposers' experts adopted the modelling assumption that Arapahoe was not eligible for the BUREC's subordination policy, and Arapahoe's expert erroneously assumed the contrary.

b. Even without considering the factor of the BUREC's subordination policy, the Opposers' experts adopted more reliable assumptions in their respective analyses of water availability (including more accurately interpreting and applying the accounting conditions of the Decree in 86CW203) than did Arapahoe's expert.

c. The Opposers' experts conducted essentially independent analyses of water availability, but their results were generally consistent, and in this sense they corroborate each other.

42. The Court notes that in its 1991 Decree it found that "there is not more than 20,000 acre-feet of unappropriated water physically and legally available on an annual average basis at the points of diversion claimed by the Applicant in case 88-CW-178." [Decretal ¶C of the Order of October 21, 1991.] Recognizing that the Supreme Court's remand opinion in this case eliminated some constraints (such as consideration of conditional water rights), Arapahoe has argued that the modelling results of Opposers' experts are inherently defective because they result in yields less than the 20,000 acre-feet quantity found by the Court in 1991, and in some respects, Mr. Helton has found quantities even less than he advocated at the 1991 trial. However, this concern is equally applicable to Mr. Leak. [In the 1991 trial, some of his scenarios demonstrated yields of 125,000 to 139,000 acre feet, whereas for the 1997 trial he calculated 103,000 to 113,000 acre-feet per year to be available -- from 25,000 to 30,000 acre-feet less than presented at the 1991 trial.] Further, in its 1991 Decree, the Court adopted the 20,000 acre-feet quantity as a "compromise figure" after recognizing that none of the

analyses by the various experts perfectly mirrored the modelling principles prescribed by the Court, and that deficiencies in each approach militated against the Court's adoption of either side's position as the actual amount of water available.

43. Given the importance of the Aspinall Unit, and any "subordination" of the senior water rights for said project which the BUREC may have authorized, it is now incumbent upon the Court to analyze the evidence relating to said subordination.

## V. HISTORY OF THE CURECANTI (ASPINALL) UNIT

### A. Impact of Aspinall Water Rights on Gunnison River Basin

44. The senior water rights of the federal Aspinall Unit taken as a whole have the greatest potential impact on the availability of water in the Gunnison River Basin, especially upstream of the project.

45. The United States holds a number of absolute decrees for water rights for a variety of purposes in connection with the Aspinall Unit, which is a large CRSPA project located on the main stem of the Gunnison River. Said project consists of three reservoirs and power plants, including: Blue Mesa, Morrow Point and Crystal Reservoirs, which together are capable of storing 1,090,000 acre feet of water.

46. Conditional rights for the Curecanti water were initially awarded to the River District based upon applications filed in former Water Districts 28, 59 and 62. The decrees were issued in Case No. 5591 [Exhibit 1105, Tab 142], Case No. 5590 [Exhibit 1105, Tab 4] and Case No. 6981 [Exhibit 1105, Tab 87], and approved the following multiple, beneficial uses: domestic and municipal, irrigation and stockwatering, industrial, development of electrical energy, flood control, piscatorial, wildlife protection and preservation and recreational purposes.

47. On December 11, 1980, Case No. 80CW156, this Court made absolute the conditional decrees referred to in ¶46 above:

| | |
|---|---|
| Crystal Reservoir | 30,000 acre feet |
| Crystal Power Plant | 3,000 c.f.s. |
| Blue Mesa Reservoir | 940,755 acre feet |
| (Refill decree for Blue Mesa Reservoir) | 122,702 acre feet |
| Blue Mesa Power Plant | 2,500 c.f.s. (originally 3,500 cfs) |
| Morrow Point Reservoir | 119,053 acre feet |
| Morrow Point Power Plant | 5,450 c.f.s. |

48. Prior to the 1997 remand trial (as well as prior to 1991 trial), the parties filed several motions pursuant to C.R.C.P. 56(h) to determine whether the United States can operate the Aspinall Unit in such a way as to preclude all upstream development. Arapahoe asserted that the Court's adoption of such a position would be contrary to the purposes of CRSPA, as well as the explicit provisions of that Act. After considering the C.R.C.P. 56(h) Motions, this Court held that the United States is entitled to use the full decreed amounts of its water rights for the

authorized purposes of the project, which include providing water, by contract, to domestic, municipal, industrial, and agricultural users. Said rights were held to be senior to any and all rights claimed by Arapahoe in its applications in this case, and nothing in CRSPA precludes the United States from preventing appropriations upstream of the Aspinall Unit. However, the Court also held that the exercise of the Aspinall water rights is subject to the obligation to subordinate 60,000 acre feet of future upstream consumptive uses. [November 5, 1996 Order, at ¶ B.1.8.(c)(4), pp. 9-10.] It remained an issue of fact for trial whether the subordination applies to trans-basin uses. The Opposers also claimed that Arapahoe must have a contract to benefit from the subordination, but Arapahoe insists that it has no obligation to enter into a contract to obtain the benefit of any subordination. To understand the dynamics which inspired the "subordination" concept, it is necessary to next review the evolution of the development of water resources of the Colorado River Basin generally and the Gunnison River Basin specifically.

**B. History of Water Development in Colorado River Basin**

49. Colorado's Continental Divide running along the highest elevations of the Rocky Mountains dictates the source of water resources in the state, with the result that considerable water flows into the basin of the Colorado River and its tributaries, including the Gunnison River on the western slopes of the Divide. Less water falls and flows on the eastern side of the Divide where Colorado's population development has been the greatest. As a result, those on the eastern plains have seen the western slope as a natural source to meet their need for water, and the western slope, which has developed more slowly than the eastern portion of the state, has been anxious to preserve an adequate amount of the waters of the Colorado River for full development of the western portion of the state. These competing interests have lead to intense disagreements and costly litigation over the allocation of the limited water resources of the state, especially those in the Colorado River Basin. The present case is the most recent example of the intensity of this conflict.

50. In the early decades of the 20th Century, the east and west slopes became uneasy allies borne out of their apprehension that the United States would seek adjudication of water rights in federal courts and brought together by their common desire to safeguard limited water resources in Colorado against the interests of other states who depend upon the Colorado River as a vital water supply. Efforts to address these concerns, initiated in large part by Colorado and its negotiator, Delph Carpenter, led to the adoption of the Colorado River Compact in 1922. [Lochhead: 10/24/97 Transcript, pp. 64, 69-71] This Compact established a limit on the amount of water which the Upper Basin States [Colorado, Utah, Wyoming and New Mexico] had to deliver to the Lower Basin States [California, Arizona and Nevada].[8] Similar concerns and efforts led to the adoption of the Upper Colorado River Compact in 1948.[9]

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[8] see: C.R.S. 37-61-101, et seq.

[9] see: C.R.S. 37-62-101 et seq. Also see ¶20.c on pages 13-14 of this Order.

This Compact allocated among the Upper Basin states, the waters of the Colorado River to which said states were entitled under the 1922 Compact. Colorado received a 51.75% share.

### B.1 Legislative Efforts to Address Intra-State Issues

51. While the Eastern-Western Slope controversy has at times been intense, and sometimes bitter, over trans-mountain diversions of water from the Colorado River Basin to the Eastern Slope, efforts have been made over the years with limited success to try to reach accommodations which will permit both sides to realize their full potential in the development of water resources. Because water users from both slopes favored the adjudication of water rights through state courts, rather than federal courts, both sides looked to the Colorado General Assembly for a solution for fairly allocating of the water resources in the Colorado River Basin. In 1937 the legislature adopted a "tiered setup of public policy agencies," including the Colorado Water Conservation Board (as a state-wide board) and water conservancy districts and the Colorado River Water Conservation District (as regional districts) which had varying responsibilities in the development of water resources within the state of Colorado and within the regional boundaries of the respective districts. A primary objective was to implement the construction of large reclamation projects which envisioned compensatory storage pools to facilitate trans-basin diversions. [Lochhead, 10/24/97 Transcript, p. 67-71]

#### B.1.1 Water Conservancy Districts

52. In 1937 the Colorado General Assembly adopted the Water Conservancy Act [C.R.S. 37-45-101 et seq] which recognized the need for conservation of water resources for "the greatest beneficial use of water within this state." [§37-45-102(1)] [Formed in 1959, Gunnison District, an Opposer in this case, is such a district.]

a. Said legislation expressed the policy that the state (through these districts) "should cooperate with the United States under the federal reclamation laws and other agencies of the United States government for the construction and financing of 'works' [structures and facilities to develop water projects] in the state of Colorado as defined in this article and for the operation and maintenance thereof." C.R.S. 37-45-102(2)(c).

b. Mr. Lochhead testified to the fact that in dealing with trans-basin issues, the legislature has tried to address the practical, political and financial issues pertaining to such developments, and he specifically referred to a provision in the Water Conservancy Act which "limits any diversion from the natural basin of the Colorado River by a conservancy district in a way that would impair either present uses or prospective uses of water in the natural basin of Colorado." [Lochhead, 10/24/97 Transcript, p. 78] The actual section of the Act was amended in 1943 to provide the following:

> "Any work or facilities [planned for the exportation of water from the natural basin of the Colorado river and its tributaries in Colorado] shall be designed, constructed, and operated in such

manner that the present appropriations of water and, in addition thereto, prospective uses of water for irrigation and other beneficial consumptive use purposes, including consumptive uses for domestic, mining, and industrial purposes, within the natural basin of the Colorado river in the state of Colorado from which water is exported will not be impaired nor increased in cost at the expense of the water users within the natural basin." [Emphasis Supplied] 2nd sentence of C.R.S. 37-45-118(1)(b)(II).

c. Under this statute the Courts have given some deference to water conservancy districts in their efforts to give priority to the development and use of water resources within their district boundaries. The Supreme Court affirmed the spirit of the Water Conservancy Act and the principle that a water conservancy district may enforce rules and contract provisions which restrict the use of Bureau of Reclamation water to its intended purposes within the boundaries of the district. Further, the Supreme Court did not disapprove of the water judge's rationale that the policy of CRS 37-45-118 supporting "in-basin development" may be "parochial" but it could be explained by the principle of rewarding the taxpayers of the district. City of Thornton v. Bijou Irrigation Co., 926 P.2d 1, 55-60 (especially pp. 55 and 59) (Colo. 1996)

B.1.2 Colorado River Water Conservation District

53. In 1937, the General Assembly also enacted legislation [C.R.S. 37-46-101, et seq.] creating the Colorado River Water Conservation District [which is the "River District" in this litigation]. Said District encompasses all or portions of fifteen western slope counties (including the drainage of the Gunnison River basin.

a. The legislative declaration for the establishment of the district states as follows:

"In the opinion of the general assembly of the state of Colorado, the conservation of the water of the Colorado river in Colorado for storage, irrigation, mining, and manufacturing purposes and the construction of reservoirs, ditches, and works for the purpose of irrigation and reclamation of additional lands not yet irrigated, as well as to furnish a supplemental supply of water for lands now under irrigation, are of vital importance to the growth and development of the entire district and the welfare of all its inhabitants and that, to promote the health and general welfare of the state of Colorado, an appropriate agency for the conservation, use, and development of the water resources of the Colorado river and its principal tributaries should be established and given such powers as may be necessary to safeguard for Colorado, all waters to which the state of Colorado is equitably entitled under the Colorado river compact." [emphasis supplied] C.R.S. 37-46-101.

b. This Court interprets this declaration as a recognition by the General Assembly that the orderly and timely development of water resources within the district's boundaries benefits the state of Colorado as a whole, and that the district's efforts to exercise its

powers to undertake studies, to appropriate water, to contract for the construction of works and facilities and to otherwise pursue those interests which promote the development of the waters of the Colorado river for the benefit of the entire district are entitled to some preference against outside interests, if the anticipated developments are reasonably foreseeable. This Court recognizes that this conclusion is subject to the holding of the Colorado Supreme Court in Metropolitan Suburban Water Users Association v. Colorado River Water Conservation District, 148 Colo. 173, 365 P.2d 273 (1961) which held that the District cannot hoard the waters of the Colorado River arising within its boundaries, and it cannot preclude diversion by others outside the Colorado River Basin in the absence of reliable plans to develop water within the district to satisfy reasonably anticipated future needs.

### B.1.3 Colorado Water Conservation Board

54. The Colorado Water Conservation Board ["CWCB" or the "Board"] consists of 14 members including the executive director of the Department of Natural Resources [presently James Lochhead, a witness in this case] (who serves as a voting member ex officio). Also serving on the board as nonvoting ex officio members are the attorney general, the state engineer [Hal Simpson, a witness in this case], director of the division of wildlife, and a director. Nine remaining members, "well versed in water matters, "are selected geographically: four representing the 4 major drainage basins on the western slope, four representing the 4 major drainage basins on the eastern slope, and one from the City and County of Denver. All of the regional representatives are appointed by the governor to three years with the consent of the senate. C.R.S. §§37-60-102 and 37-60-104. [Lochhead, 10/24/97 Transcript, p. 55] The duties of the Board include:

> "(promoting) the conservation of the waters of the state of Colorado in order to secure the greatest utilization of such waters . . . " (and especially) "to foster and encourage . . . conservancy districts . . . and any other agencies which are formed under the laws of the state of Colorado, or of the United States, for the conservation, development, and utilization of the waters of Colorado;" [§37-60-106(1) and (1)(a)]
>
> "(conducting studies) of the water resources of the state of Colorado . . . to the full extent necessary to a **unified** and harmonious development of all waters for beneficial use in Colorado to the fullest extent possible under the law, including the law created by compacts affecting the use of said water. The studies to be made shall include analyses of the extent to which water may be transferred from one watershed to another within the state **without injury to the potential economic development of the natural watershed from which water might be diverted** for the development of another watershed." (Emphasis supplied) [§37-60-115(1)(a)]

55. At trial, Mr. Lochhead, the executive director of the Department of Natural Resources, offered the following testimony regarding the 1937 legislation:

a. He also noted that the CWCB operates on a state-wide basis to promote water development throughout the state, while the River District "is charged with the protection and preservation of development opportunities for that broad geographic area." And the water conservancy districts are "to actually own, operate, manage the water rights and the water facilities for the benefit of a smaller geographic area." [Lochhead, 10/24/97 Transcript, p. 79-80]

b. He noted that the foregoing legislation, directed water conservancy districts and the CWCB to consider the economic impact of the development of trans-basin diversion projects on the basin of origin. Mr. Lochhead then opined that this directive reflected "the policies of the Colorado legislature in trying to achieve this accommodation or balance of interests between East and West Slopes." [Lochhead, 10/24/97 Transcript, pp. 78-79]

56. At several points, Mr. Lochhead characterized the attitudes of the River District and the Gunnison District toward trans-basin diversions. He stated that the western slope generally "felt somewhat under siege from trans-basin development proposals" [Lochhead, 10/24/97 Transcript, p. 80-81, 101]; and that while at times they felt "threatened" [p. 101] and at times the River District was a "vigorous player" [p. 106] involved in "fierce debate" [p. 119], nevertheless the "River District has both opposed and negotiated for the construction of trans-basin diversion projects." [p. 98] He also observed that the River District views "its role as protecting the interests of Western Colorado water users vis-a-vis the impacts associated with trans-basin water development." [Lochhead, 10/24/97 Transcript, p. 104]

B.2 1940's Studies to Develop Colorado's 1922 Compact Entitlement

57. On cross-examination by Arapahoe's counsel, Mr. Lochhead reviewed certain proposals in the 1940's which contemplated the development of projects for the trans-basin diversion of waters from the Colorado River Basin, especially from the Gunnison River. These included particularly a Comprehensive Report by the BUREC in March 1946 [Exhibit 3080], Comments issued in December 1946 by the CWCB objecting to the March 1946 BUREC Report [Exhibit 3081], and a 1950 Report on the Frying Pan-Arkansas Project [Exhibit 3092]. Mr. Lochhead acknowledged that the March 1946 Report was "somewhat seminal" with regard to development of water in Colorado, because it "served as the basis for the negotiations that led to the 1956 Act (and it) also led to the negotiation of the 1948 Upper Basin Compact." [Lochhead, 10/24/97 Transcript, p. 99]

58. Various studies and reports prepared from 1946 through 1953 contemplated potential trans-basin diversion projects, including some which envisioned exporting several hundred thousand acre-feet from the Gunnison River to the Arkansas River. These reports are discussed briefly in ¶¶59-63 as follows:

59. A early concept, known as the Gunnison-Arkansas ("Gunn-Ark") Project, was proposed in the **March 1946 Report** and suggested that 835,000 acre-feet could be exported annually from the Gunnison River to the Arkansas and Rio Grande Rivers, with 460,000 acre-feet to come from the

Upper Gunnison River Basin (above the City of Gunnison). [Exhibit 3080, p. 126, 133] Numerous other projects for development within the Gunnison River Basin, and throughout the Colorado River Basin were also suggested for developing Colorado's entitlement under the 1922 Compact.

60. In **December 1946, the CWCB**, on behalf of the state of Colorado, **issued Comments** which objected to the March 1946 Report in its present form. The CWCB Comments pointed to the need to correct inequities where the Report favored the Lower Basin states over the Upper Basin states and Utah over Colorado. The Comments were also critical of inconsistencies, misleading assertions of fact, and unsound recommendations. In short, the CWCB recommended that the March 1946 Report not be transmitted to Congress until said deficiencies were corrected. Generally the Comments asserted positions intending to benefit the entire state and to **balance** the interests of both the East Slope and the West Slope. [Lochhead, 10/24/97 Transcript, p. 103] The CWCB Comments identified many potential projects in Colorado as worthy of consideration. It made brief mention of proposed projects to divert water from the Colorado River Basin into the Arkansas and South Platte valleys [Exhibit 3081, p. 21], but also recognized the importance of protecting the prospective use of water within the natural basins vis-a-vis trans-basin diversion projects. In this regard, the Comments stated:

> "Project plans for the diversion of water from the natural basin must envision the appropriate plans for water utilization within the tributary areas of the Colorado River Basin. This is particularly important in such states as Colorado where a policy is followed, heretofore approved by the Bureau of Reclamation, of protecting present and prospective uses of water within the natural basin in the State in connection with plans for transmountain diversion projects. A program for the integration of the activities of these interested regions in cooperation with the interested states for the furtherance of state programs should be initiated." [Exhibit 3081, pp. 17-18]

61. In **June, 1948, an interim report** for the "Gunnison-Arkansas" Project was prepared by the BUREC. Said report specifically identified the potential Curecanti Reservoir with a capacity of 1.07 million acre feet of water to meet regulation and replacement storage demands of the Uncompahgre Irrigation Project and other irrigation water users along the Gunnison River. The report also discussed a potential reservoir at Almont (at the point where the East River and the Taylor River join to form the Gunnison River) to hold approximately 385,000 acre feet of water. The envisioned purpose of the reservoir was to regulate water for diversion to the Eastern Slope to supply the Gunnison Arkansas Project. In addition, the report considered the possibility of enlarging the Taylor Park Reservoir to a total capacity of 750,000 acre feet (about seven times its present capacity) with said reservoir to be used to store and regulate waters for diversion to the Eastern Slope. [Exhibit 3084] Appendix D to said report dated June, 1948 provides substantial detail with respect to said proposals. [Exhibit 3087]

62. Further in 1953, the BUREC issued a Transmittal Letter [Exhibit 3092] referring to Congress **a January 1950 Report on the Frying Pan-Arkansas Project**. Features of the Report are as follows:

¶62 a. The transmittal letter itself recognized that the waters of the Arkansas River in the upper Arkansas River Basin are over-appropriated, and action needed to be taken to address agricultural and municipal concerns, the need for additional electric power and for flood control. Those in the Arkansas Valley [on the eastern slope of Colorado] dealing with these concerns looked to the west, across the Continental Divide, to the Colorado River Basin, and more specifically to the Gunnison River Basin and the Roaring Fork River Basin (both tributaries to the Colorado River) for additional water resources.

b. The Project envisioned two phases: the first, and smaller, phase, known as the Frying Pan-Arkansas Project, contemplated the trans-mountain diversion of water from the Frying Pan River and Hunter Creek (tributaries to the Roaring Fork River) eastward to the Arkansas Valley; and the second, and larger, phase, contemplated the trans-mountain diversion of water from the Upper Gunnison River Basin to the Arkansas Valley.

c. The 1950 Report focused on the first phase, but also noted the need for further study of the second phase, which in this preliminary report proposed a very large reservoir where the Blue Mesa Reservoir was eventually constructed. Said reservoir site (and a second reservoir site identified as the "Bridgeport Reservoir") were designated on a map of the Gunnison River Basin as "Western Slope Development and Replacement to be integrated with Gunnison-Arkansas Project." [Exhibit 3092, p. FS-000280]

d. However, the 1950 Report also emphasized the following:

"The full potential uses of water in western Colorado have not been completely determined; therefore, only the amount of water assuredly beyond the requirements for development on the western slope is proposed for diversion at this time." [Exhibit 3092, ¶4 p. FS 000167]

The Report also contained the recommendation that additional study continue regarding the overall plan (including presumably the "second phase" for trans-basin diversions from the Gunnison River Basin), and the recommendation anticipated investigation of "importation of additional supplies of water into the (Arkansas River) basin which may be determined to be <u>in excess</u> of the present and potential requirements of the basin from which exportation may be proposed." (Emphasis supplied) [Exhibit 3092, ¶88.M, p. FS 000189]

e. The 1950 Report proposed that the Frying Pan-Arkansas phase of the overall project would result in the average annual diversion of 69,200 acre feet of water through the Roaring Fork Diversion.[10] [Exhibit 3092, ¶59, p. FS 000178] And the Report also took the

[10] The anticipated total consumptive use was projected to be 75,200 acre-feet, after adding 3,000 acre-feet for fish-preservation purposes, and 3,000 acre-feet for evaporative and transit losses.

position that extensive studies by the BUREC and the CWCB substantiated the conclusion that there was plentiful water available for this first phase, and water could be feasibly diverted without detriment to the diversion area or to other existing and potential water uses on the western slope - even though the full needs of the western slope could not be foreseen at that time. The reasonableness of this conclusion was support-ed by recognition that the project also anticipated the future construction of a replacement storage reservoir near Aspen to protect western slope interests. [Exhibit 3092, ¶17, p. FS 000169]

f. In his testimony concerning this 1950 Report on the Frying Pan-Arkansas project, Mr. Lochhead stated that it recognized [in ¶40 on p. FS 000173 of Exhibit 3092] that the BUREC was planning a Colorado River Storage Project; and that the Bureau's plan for said Project contemplated the development of at least six major regulatory reservoirs in the Upper Colorado River Basin and that the diversion of water from the Colorado River Basin was consistent with the proposed Project [Lochhead, 10/24/97 Transcript, p. 112]; and that when the 1950 Report was transmitted to Congress in 1953, the second phase of the Gunnison-Arkansas Project, although not abandoned, had been separated from the first phase. [Lochhead, 10/24/97 Transcript, p. 114] [This "second phase" was directly related to diversions from the Gunnison River Basin.]

63. In fact in October 1953, a report was issued based upon a study conducted by Leeds, Hill and Jewett under the auspices of the Colorado Water Conservation Board, which directly addressed the potential development of trans-basin water to be exported from the Gunnison River Basin to the Arkansas Valley. The report concluded that 1 million acre-feet of water could be stored as part of the development of reservoirs, (especially Curecanti), on the Gunnison River. The report anticipated that 500,000 acre feet would need to be reserved for the Uncompahgre Water Users Association, but that would leave 500,000 acre feet available for trans-basin diversion. This Report was submitted to the Senate by Senator Anderson in March 1955 under the title: Report on the Depletion of Surface Water Supplies of Colorado West of Continental Divide." [Exhibit 3093. See p. 28 for "Diversions From Gunnison River Basin"] It is significant to note however, that this proposal was never pursued.

## B.3 Compensatory Storage Concept

64. A concept which grew out of the legislation establishing the water conservancy districts was the requirement that a transmountain exporter of water must construct reservoirs and facilities for "compensatory storage" for the benefit of the basin from which the water was being diverted. This method of protecting in-basin interests was confirmed in the 1943 amendment to the statute [CRS 37-45-118(1)(B)(II)] quoted in **¶52.b** above.

65. A few examples in which the use of compensatory storage reservoirs were utilized to facilitate the transmountain diversion of water and which have some bearing on the present case, are as follows:

### B.3.1 Colorado-Big Thompson Project

66. With the passage of the Water Conservancy Act in 1937, the Northern Colorado Water Conservancy District was promptly established to help develop the Colorado-Big Thompson Project which was to provide municipal water for use on the Eastern Slope of Colorado.

a. The project was opposed by Western Slope interests, but eventually an accommodation was reached which utilized the concept of compensatory storage to provide some protection for in-basin users while affording trans-mountain appropriators the ability to divert water out of the basin. This concept was formally recognized in Senate Document No. 80 (75th Congress) in 1937. [see 2 G. Vranesh, Colorado Water Law, §7.1 pp. 758-759 (1987).] Also see Lochhead's testimony regarding the Colorado-Big Thompson Project as an illustration of the anomalous situation of a federally decreed water right integrated into the state's administrative system. [Lochhead, 10/24/97 Transcript, pp. 69-70]

b. Completed in 1957, the Colorado-Big Thompson Project resulted in the construction of the Green Mountain Reservoir to store water diverted from the Blue River, a tributary of the Colorado River. The reservoir was intended to hold replacement storage of more than 100,000 acre-feet for use on the Western Slope in return for the Eastern Slope's right to divert 320,000 acre-feet through a trans-mountain diversion through the Adams Tunnel into the Big Thompson River which is located in the Platte River Basin on the Eastern Slope. This project is an example of an early accommodation reached between the east and west slope interests regarding transmountain diversion. [see 2 G. Vranesh, Colorado Water Law, §7.1 pp. 758-759 (1987); also see §7.3, pp. 788-789.]

### B.3.2 Denver's Blue River System

67. Another project involving compensatory storage was undertaken in the early 1940's based upon a plan by the City of Denver to divert water from the Blue River through a tunnel (to become known as the Roberts Tunnel). Although the concept was first envisioned in 1922, construction of the tunnel actually commenced in 1946 and was not completed until 1962. A primary feature of the project was the Dillon Dam (completed in 1963) which created a compensatory storage reservoir with a capacity of about 254,000 acre-feet to support diversions which to-date have been as high as 136,000 acre-feet or so. This project engendered protracted litigation. [see: City and County of Denver v. Northern Colorado Water Conservancy District, 130 Colo. 375, 276 P.2d 992 (1954)] After the Colorado Supreme Court's opinion was rendered in 1954, litigation continued in the federal district court for Colorado, and eventually was brought to a conclusion by a stipulation and decree in the federal court. [see 2 G. Vranesh, Colorado Water Law, §7.3, pp. 784-786 (1987)] [Exhibit 4028, Bate #5226-5234 for some "colorful" western slope reaction by John Barnard, Esq.]

### B.3.3. Frying Pan-Arkansas Project

68. As explained in some detail in **¶62 above**, a third project involved development of the Frying Pan-Arkansas by the Southeastern Colorado Water Conservancy District which diverts water from the Western Slope to augment the Arkansas River. This project was actually authorized by Congress in 1962 and it was completed in 1982. Said project diverts water from the Frying Pan River, a tributary of the Colorado River, through the Boustead tunnel to the Arkansas River Basin on the Eastern Slope. A compensatory storage facility in this project is the Ruedi Reservoir, located on the Frying Pan River in Pitkin County on the Western Slope in Water Division 5. The reservoir has a capacity of 102,369 acre feet as compensatory storage and the project diverts about 69,000 acre feet of water each year. [see 2 G. Vranesh, Colorado Water Law, §7.3, pages 793-94 (1987)]

## C. Colorado River Storage Project Act and the Curecanti (Aspinall) Unit

### C.1 Legislative History of CRSPA

69. In 1950 efforts were undertaken in Congress to enact legislation, known as the Colorado River Storage Project Act [CRSPA], for the development of water resources in the Upper Colorado River Basin. [See Exhibit 3011] The initial drafting of the statute contemplated construction of ten holdover storage units to capture and regulate water arising in the Upper Basin states so as to facilitate the exercise of their rights and responsibilities under the 1922 Colorado River Compact.[11] The statute also contemplated twelve participating irrigation projects.[12]

70. In December, 1950, the State of Colorado submitted comments to Congress with respect to the proposed CRSPA legislation. While the state's position was very supportive of the legislation and particularly units and projects identified with the Gunnison River Basin, nevertheless, the report recommended further study before approval or action was taken with respect to reservoirs located at Whitewater (later known as Bridgeport), Curecanti and Crystal. [Exhibit 3089] This report was submitted to Congress on June 12, 1951, by Colorado Governor Dan Thornton and by Clifford Stone, Director of the Colorado Water Conservation Board. The reason given for the delay and further study was the need to address "many local problems" which included concerns about trans-mountain diversions. [Exhibit 170, pp. 298-304]

71. From 1954 to 1956, hearings were conducted in both the U. S. Senate and in the House of Representatives by subcommittees concerned

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[11] The ten storage units included: Echo Park, Flaming Gorge, Glen Canyon, Navaho, Whitewater, Cross Mountain, Crystal, Curecanti, Gray Canyon and Split Mountain. The first five were recommended for early authorization. [The Whitewater, the Curecanti and the Crystal were on the Gunnison River.]

[12] Including two projects on the Gunnison River: the Paonia project and the Smith project.

with irrigation, reclamation and interior affairs. In the early stages of the proposed legislation, it was thought that some 3 million acre-feet of new storage could be created above Grand Junction, mainly on the Gunnison River, and it was anticipated that 2.5 million acre-feet of water would be stored in the Curecanti Unit. [Exhibit 170, pp. 70 and 26 respectively.] The evolution of said legislative history is as follows:

¶71 a. Early on, in January, 1954, the state of Colorado expressed as an official position, a recognition of the need to put Colorado River water to beneficial consumptive use expeditiously and state officials recommended construction of the De Beque Reservoir, the Curecanti Reservoir and approval of transmountain diversions on the Blue River and the Green Mountain Reservoir. [Exhibit 170, pp. 29-31]

b. Testifying before Senator Millikin's subcommittee in July, 1954, Colorado Senator Edwin Johnson urged the adoption of CRSPA, viewing it as a way to help resolve serious problems regarding an equitable division of waters produced on the Western Slope of Colorado. Senator Johnson recognized the ongoing dispute between the East Slope and the West Slope over the development of water but urged that the disagreement not block the adoption of CRSPA. [Exhibit 171, pp. 26-28]

c. Also in July 1954, John Will, general counsel for the Upper Colorado River Commission, advocated that the reservoir for Curecanti be modified to impound 940,000 acre feet of water, but he still supported development of 3 million acre feet of water from the Gunnison River Basin. He recognized the need for further study in this regard. He made no specific references to trans-mountain diversions from the Gunnison River, but did support the Blue River trans-mountain diversion utilizing the Dillon Reservoir. [Exhibit 171, pp. 36-37]

d. Hearings in 1955 before the House subcommittee chaired by Congressman Aspinall of Grand Junction, focused on House of Representative's version of the CRSPA legislation [House Bill 3383]. A number of witnesses appeared before the subcommittee. A strong contingent from the Western Slope sought protection of in-basin users of Colorado River water and relied on the statute in Colorado adopted in 1943 which recognized the obligation of water conservancy districts to develop water within their districts. [See 37-45-118(1) CRS] A primary objection voiced by the delegation was to §11 of the law [Exhibit 174, pp. 13 and 17] which would authorize the United States to transfer water to Denver. [Exhibit 174, pp. 451-464] Some references in the testimony, however, recognized that the conveyance of water to Denver through the Blue River Project should be based upon payment by Denver for the value thereof. [Exhibit 174, p. 17] This issue had also been raised in Senator Millikin's subcommittee hearings in July, 1954 with respect to Senate Bill 1555. [Exhibit 172, p. 7]

e. By July, 1955, a report by the House Committee on the Interior and Insular Affairs recommended support of House Bill 3383 which at that time included the concept of four reservoirs on the Gunnison River, namely: Blue Mesa Reservoir, Narrow Gauge, Morrow Point and

Crystal to make up the Curecanti Unit. The Blue Mesa Reservoir was to have a capacity of 940,000 acre feet. [Exhibit 175, pp. 8-9]

f. In February 1956 the BUREC issued a Status Report with respect to the four-reservoir concept having a total storage capacity of 1,039,000 acre feet. The Report was generally positive in acknowledging the "apparent" feasibility of the project, but recognized that several aspects of the project including the "power operation" feature of the Unit had yet to be evaluated. In a section entitled "Future Upstream Depletion of Water" it was noted that adjustments needed to be made for additional upstream depletions in an amount averaging **59,000 acre-feet** annually. This figure anticipated the development of five potential irrigation projects being considered in addition to the Curecanti Unit: Ohio Creek, Tomichi Creek, East River, Bostwick Park and Fruitland Mesa. Each had been mentioned in the 1951 reconnaissance report on the Gunnison River project. The 1956 Status Report also noted that upstream depletions from potential transmountain diversions had not been considered, but the Report did note that any such diversions would further reduce the water supply for the Unit. [Exhibit 3094: see "Summary Sheets" and p. 26]

g. Finally in March, 1956 a conference committee representing members of both houses reported on the CRSPA legislation and recommended that the Curecanti Project be modified to **3 reservoirs** with the Blue Mesa Reservoir to hold 940,000 acre feet. [Exhibit 177, p. 2352] This report specifically directed the Secretary of Interior to study trans-mountain diversions. [Exhibit 177, p. 2363]

## C.2 Enactment of CRSPA on April 11, 1956

72. The Colorado River Storage Project Act was enacted effective April 11, 1956, [see: 43 U.S.C. §620] to "initiate the comprehensive development of the water resources in the Upper Colorado River Basin" for the following purposes [see: 70 Stat. 105, 43 U.S.C. §620]:

-regulating the flow of the Colorado River,
-storing water for beneficial consumptive use,
-making it possible for the States of the Upper Basin to utilize (consistently with the provisions of the Colorado River Compact), the apportionments made to and among them in the Colo-rado River Compact and the Upper Colorado River Basin Compact, respectively,
-providing for the reclamation of arid and semiarid land,
-for the control of floods, and
-for the generation of hydroelectric power, as an incident of the foregoing purposes.

73. Of the ten storage projects identified in the initial drafts of the legislation, Congress authorized construction of four units for the Colorado River Storage Project: Curecanti [later renamed the "Wayne N. Aspinall Unit" based upon a 1980 Amendment, see: Pub.L. 96-375], Flaming Gorge, Glen Canyon, and Navajo -- which together have a total storage capacity in excess of 30 million acre feet. Also the Act also authorized

the construction of various "participating projects"[13] and several other "participating projects"[14] were identified for "further investigations."

a. **Curecanti [now Aspinall] Unit** is located on the Gunnison River about 30 miles downstream from the City of Gunnison in Gunnison County, Colorado, and includes three reservoirs (Blue Mesa, Morrow Point and Crystal) which together hold about 1,090,000 acre feet. Construction of this Unit was conditioned on further engineering and economic investigations by the Secretary of the Interior to determine if the project was economically justified in the sense that its benefits would exceed its costs. 43 U.S.C. §620

b. **Flaming Gorge Dam** is located on the Green River in Utah near the Wyoming-Utah border and impounds approximately 3,749,000 acre feet which extends into Wyoming.

c. **Glen Canyon Dam** is located on the main stem of the Colorado River in Arizona just above Lee Ferry and impounds approximately 25,000,000 acre feet, in Lake Powell which is located in Utah.

d. **Navajo Dam** is located on the San Juan River in New Mexico and impounds approximately 1,696,400 acre feet.

74. Further, construction of 21 additional reclamation projects, called "participating projects" was authorized, including two in the Gunnison River Basin which are relevant to this case: Bostwick Park and Fruitland Mesa [43 U.S.C. §620]. Also, investigation of other projects under the Federal reclamation laws was authorized for additional participating projects, including three in the Upper Gunnison (ie. the East River, Ohio Creek and Tomichi Creek). [43 U.S.C. §620a].

C.3 Economic Justification of the Curecanti Unit

75. Studies were conducted to satisfy CRSPA's requirement for further analysis of the economic justification for the Curecanti Unit.

a. **1958 Report:** A Financial and Economic Analysis Report was issued in February 1958 by the BUREC with respect to the Colorado River Storage Project and Participating Projects generally. It recognized that construction was beginning on initially scheduled units, and that this 1958 Report was concerned principally with planning estimates.

b. **1959 Report:** The first economic justification study was described in a report issued July 9, 1959:

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[13] Of the 21 identified, two were directly related to the Gunnison River: Bostwick Park and Fruitland Mesa. 43 U.S.C. §620.

[14] These included three units with various sub-features under the general designation of "Upper Gunnison" (including East River Unit, Ohio Creek Unit and Tomichi Creek Unit). 43 U.S.C. §620a.

1) This 1959 Report concluded that two reservoirs: the Blue Mesa and the Morrow Point, had a favorable cost/benefit ratio. It also referenced a third reservoir, Crystal, as a possible enhancement to the benefit of the project, but concluded that if Crystal proved not to be beneficial, then it could be deleted without affecting the justification for the two reservoirs. [Exhibit 179, pp. vii-x] In keeping with the 1956 Status Report (see **§71.f** above), the 1959 Report recognized that five participating projects[15] on the Gunnison River had been contemplated by CRSPA and that 60,000 acre feet of water would be needed from the Curecanti Unit to satisfy depletions for those 5 participating projects. [Exhibits 179 & 3094]

2) The 1959 Report essentially evaluated a <u>two</u>-dam system: Blue Mesa Reservoir (with a total capacity of about 915,000 acre feet) and Morrow Point Reservoir (with a total capacity of about 117,000 acre feet). [Exhibit 182, p. 10] The Report presumed that construction of the five participating projects referenced in **¶75.b.1** would not begin until after 1971 and would be completed before 2020. The report also allocated a 60,000 acre foot depletion allowance as follows: 40,000 acre feet above Blue Mesa, 10,000 acre feet above Morrow Point and 10,000 acre feet above Crystal. [See Exhibit 182, p. 15 and Exhibit 4021] {On page 14 of the Report, it is noted that the "Crystal reservoir site" is to be covered in a future report.]

¶75 c. **1962 Report:** The second economic justification study was described in a report issued in April 1962:

1) The 1962 Report focused on the Crystal Reservoir. However, it did report the following capacities of the three Curecanti Reservoirs as follows: Crystal (total capacity 38,190 AF; 16,430 active); Blue Mesa (total capacity 940,800 AF; 748,500 active) and Morrow Point (total capacity 117,190 AF; 42,120 active). The 1962 Report recognized that the feasibility of the Curecanti Unit would not be adversely affected by future additional depletions based upon the same 60,000 acre feet of annual depletions stated in the 1959 report. [Exhibit 4062, pp. 1 & 5; attached Water Supply Appendix, pp. 9 & 17] [Also see Exhibit 213 by which the Assistant Secretary of the Interior formally submitted the 1962 Report to the Speaker of the House of Representatives]

2) In this 1962 Report, the breakdown of the 60,000 acre feet depletion allowance [as contemplated in the 1959 Report] among the three reservoirs was explained: 40,000 acre feet above Blue Mesa Reservoir anticipated total stream depletion by the Ohio Creek, Tomichi Creek and East River projects and included 10,000 acre feet for Fruitland Mesa (diverted from Soap Creek); 10,000 acre feet above Morrow Point assumed depletion by the Fruitland Mesa project; and 10,000 acre feet above Crystal assumed

[15] Tomichi Creek, East River, Ohio Creek, Fruitland Mesa and Bostwick Park as part of the Upper Gunnison Basin Project (which included several sub-projects and features). See ¶¶85-86 below.

depletion by Bostwick Park and a 5,000 acre-feet depletion by Fruitland Mesa from Crystal Creek. [Exhibit 4062, p. 17 of the Water Supply Appendix; Also see Exhibit 213]

3) It appears that after 2020, the BUREC was willing to consider additional depletions beyond the 60,000 acre-feet depletion allowance. [Lochhead, 10/24/97 Transcript, p. 148] It is not clear whether these increased depletions would be limited to in-basin or not, but the argument can be made from the context of the provisions regarding increased depletions, that they would be for the purposes of facilitating development of water resources within the Upper Gunnison River Basin, just as the 60,000 acre-feet of anticipated depletion allowances between 1975 and 2020 were limited to in-basin uses. [Exhibit 213, p. 10]

76. As to the other three main stem projects (Glen Canyon, Flaming Gorge, and Navajo Dam), Congress did not require economic justification reports as it did for Curecanti, although the economic feasibility of each project was analyzed as part of the authorization process. [Lochhead, 10/24/97 Transcript, p. 144]

77. The history of what came to be constructed as the Curecanti Unit (with three reservoirs) reveals a trial and error process influenced by conflicting interests and competing concerns which proposed a variety of preliminary configurations for developing water resources in the Gunnison River Basin. Some of these ideas matured into serious, proposed concepts and eventually the final plan for the Curecanti facility was authorized by federal legislation. [Lochhead, 10/24/97 Transcript, pp. 120-121]

78. However, after all of the studies in the 1940's and 1950's which would have dedicated at least a portion of the final Curecanti Unit to trans-mountain diversion uses, the final configuration contained no such feature as an integral part of the project. In fact, a significant focus of the Unit's development recognized participating projects, under the umbrella of the Upper Gunnison Basin Project, which would be constructed specifically for in-basin development only.

## D. Acquisition of State Water Rights for Curecanti Unit

### D.1 The Role of the River District

79. The River District was organized under C.R.S. §37-46-101 et seq. See ¶53 above for more detail regarding the legislative declarations of said statute and the authority of the District.

80. After the adoption of CRSPA, which held the promise that the Curecanti Unit would actually be constructed, the River District adopted resolutions on October 16, 1957 (amended January 15, 1957) [see Exhibit 4025] and on October 15, 1957, to authorize the filing in its name of maps and statements with the State Engineer and statements of claim for all water to be impounded and utilized by or in connection with the Curecanti Unit and Participating Projects. [Exhibit 4014, Appendix D]

81. The resolution included the expressed intent to obtain decrees for water for all beneficial purposes to which water may be put in connection with the Curecanti Unit and recognized the need for said Unit to provide holdover storage capacity to enable the upper basin states to comply with the Colorado River compact in delivering water to the lower basin states. Further, the Resolution stated, inter alia, the following:

a. that the River District did not intend to interfere in any way with the basin-wide primary functions of the reservoirs which the resolution acknowledged were "to provide holdover storage capacity to enable the Upper Basin States to comply with the requirements of the Colorado River Compact not to cause the flow of the Colorado River at Lee Ferry to be depleted below an aggregate of 75,000,000 acre feet for any period of ten consecutive years and to generate electric energy, but on the contrary, can be coordinated completely with such primary uses, and thus enhance the feasibility of said project."

b. that the River District intended to secure "firmly established and decreed rights to the use of water for all beneficial purposes to which the water may be put in connection with the Curecanti Unit".

c. that any decrees obtained by the River District would be held by it, as trustee, for the following purposes:

1) "As to such decrees for holdover storage and power production, for the primary use and benefit of the States of Utah, Wyoming, New Mexico, and Colorado, to serve the purposes and perform the functions assigned to said Curecanti Project by Public Law 485."

2) "As to the use of the water diverted and stored by said Curecanti Project for irrigation and allied purposes, by exchange or otherwise, for the use and benefit of the persons, parties or entities within the Gunnison River Basin who may, under the laws of Colorado, make beneficial use thereof." [Exhibit 4014, Appendix D]

82. In advising the Bureau of Reclamation of the adoption of the Resolution, the River District assured "[BUREC] and the States of the Upper Colorado River Basin that any decree obtained under the filing would not be used to interfere with any basin-wide aspects of the Curecanti [Aspinall] Unit of the Storage Project." [Transmittal letter of 10-28-57, Exhibit 4017]

83. A primary reason for the River District to undertake the task of obtaining the water rights needed for the Curecanti Project was its desire to have the water rights adjudicated in the state court pursuant to state law, with a state-created priority. [Lochhead, 10/24/97 Transcript, pp. 123-124] One important reason to obtain a state decree was to rule out the possibility that the BUREC would subsequently claim an earlier priority based upon its previous power site withdrawals. [See: 2/19/60 Memorandum of Philip P. Smith, as secretary, and John B. Barnard, as counsel, for the River District--Exhibit 4025, p. 5] Another reason for the River District to apply for the decrees was its concern about the impact of transmountain diversions. It felt that by adjudicat-

ing the rights in a state court, it would then be in a position to enforce its understanding with the BUREC for the subordination of 60,000 acre-feet of water. [Lochhead, 10/24/97 Transcript, p. 124] The River District had an expectation that by obtaining state decrees for the Curecanti Unit, it could protect the Upper Gunnison River Basin against trans-basin diversions. [Exhibit 4014: Minutes of 10/15/57 of the River District, Appendix B, page 4]

84. The River District filed applications in the state court for water rights for the three Curecanti Unit reservoirs and power plants, and for five participating units on the Gunnison River: Fruitland Mesa, Ohio Creek Unit, East River Unit, Tomichi Unit and Cochetopa Unit using the overall designation of "Upper Gunnison Basin Project" to describe a comprehensive plan for the diversion, storage and distribution of water of the Gunnison River and its tributaries, which would be correlated and integrated with the Curecanti Unit itself. [See: Exhibit 4025 - a 2/19/60 Memorandum prepared after the filings had been made.]

D.2 Provisions in State Water Decrees for Curecanti Unit and the Upper Gunnison Basin Project

85. Based upon the applications filed for the Curecanti rights and the Upper Gunnison Basin Project rights, conditional decrees were issued on March 30, 1960 in case 6981, for a portion of the water rights for the Curecanti Unit in former water district #62. [Exhibit 4171 and 1105, Tab 87] The balance of the Curecanti Unit water rights (as well as rights for Fruitland Mesa, Ohio Creek and East River Units as part of the Upper Gunnison Basin Project) were conditionally decreed on January 27, 1961, in Case No. 5590 in former water district #59. [Exhibit 4173 and 1105, Tab 4] Further, the balance of the Upper Gunnison Basin Project rights (Tomichi Creek and Cochetopa) were conditionally decreed on December 15, 1961 in Case 5591 in former water district #28. [Exhibit 1105, Tab 142] The **Decrees in cases 5591 and 6981** included the following provisions which are relevant to the present litigation:

a. Each Decrees explained why the BUREC would not apply for stated decreed water rights, and that River District did so instead of the United States with the intention of establishing "a firm water right" and "for the benefit of the in-basin beneficial users (of water) for irrigation, domestic, municipal, industrial and other beneficial purposes (below, as well as above said Curecanti Unit Reservoirs."[16] [See: page 247 of Decree in Case 6981 (entered 3/30/60 in Water District 62); and page 103 of Decree in Case 5590 (entered 1/27/61 in Water District 59) -- Exhibits 4171 and 4173 respectively]

b. The Decree in Case 5590 also included findings that the River District, as claimant, was acting in the nature of a trustee for the United States (BUREC) and "for the users of water in said Gunnison River Basin" and anticipates the formation of local conservation (sic

[16] The language in parentheses in this quotation is additional language used in the Decree in Case 5590 which is not included in the language used in the Decree in Case 6981.

conservancy) districts with power to contract with the United States for the actual construction of said project and its various units and features by, or under the control and direction of, the (BUREC); . . ." [page 103 of Decree in Case 5590 [Exhibit 4173]

¶85 c. Each Decree made specific findings describing plans to meet present and future needs and requirements **within** the Gunnison River (and Colorado River) Basins, including: domestic/municipal uses for the **cities of Grand Junction and Delta, Colorado** (below the project) as well as **other smaller communities and individuals**; irrigation and stockwatering uses for the full irrigation of 53,300 acres and supplemental irrigation for 58,100 acres, with the expectation that a system of exchange would be implemented **between priority holders in the district**; industrial: existing and potential industrial development **in the Gunnison and Colorado River Valleys** and adjacent territories; electrical energy for present and future development **within and adjacent to the Gunnison and Colorado River Valley in Western Colorado**; flood control to protect against Gunnison River overflows, especially **between the Black Canyon and the City of Delta** (including North Delta) which experiences damage estimated in some years as high as $400,000; piscatorial, wildlife protection and preservation, and recreational purposes which, while not essential to industrial and agricultural development **of the Basin**, these purposes add greatly to the attraction and welfare **of the area.** {See pages 247-249 of Decree in Case 6981 [Exhibit 4171] and pages 104-107 of Decree in Case 5590 [Exhibit 4173].}

d. The Decree in Case 6981 recognized that even in 1960, the Gunnison River was over-appropriated, particularly as to the "summer flows" of nearly all of the tributaries of the Gunnison River. {See page 7 of the Decree in Case 6981 [Exhibit 4171]} Also in entering this Decree in Case 6981 the River District was granted the right to reopen the evidence so it could submit the 1959 Economic Justification Report to support the feasibility of the Curecanti Unit. [pages 244-245 of Decree in Case 6981] This is significant because it was this Report which recognized that 60,000 acre-feet of water could be reserved from the Curecanti Unit for the benefit of the five participating projects and their sub-structures without diminishing the economic feasibility of the Curecanti Unit. [Exhibits 179 & 3094; also see **¶75.b above**]

e. In the decretal portion of the Decrees, the three reservoirs of the Curecanti Unit were conditionally decreed such that the waters were to be held for and used for accomplishment of the purposes identified earlier in each decree. [Decree in Case 6981 pages 251-262]

f. The Decree in Case 5590 also makes findings regarding features of some participating projects recognized in CRSPA, including the East River Unit and the Taylor River Canal. In describing the latter, the Court recognized that a primary purpose of the Taylor River Canal was to facilitate an exchange of storage between the Taylor Park Reservoir and the Curecanti Unit. The Court notes that while the conditional decree for the Taylor River Canal was eventually dismissed for lack of a showing of reasonable diligence, nevertheless some of the exchange purpose contemplated for said feature was, at least in

part, implemented through the 1975 Agreement and the Decree of this Court in case 86-CW-203.

¶85 g. **The Decree in Case 5591** recognized that the Tomichi Unit[17] and the Cochetopa Unit[18] were integrated portions of the Upper Gunnison Basin Project and were comprised of several sub-projects all of which were intended for the development of water resources within the Upper Gunnison River Basin, designed in part to support a system of exchanges of water rights, primarily for irrigation, domestic and stockwatering purposes. The decree referenced 47,050 acres to be irrigated by both the Tomichi and Cochetopa Units, and an additional 32,750 acres (including 19,470 acres of new development and 13,280 acres needing supplemental irrigation) - all within the Upper Gunnison River Basin. [Exhibit 1105, Tab 142]

h. The Court takes judicial notice from its own records that in defining the boundaries of former Water Districts 59, 62 and 28 (as referred in Cases 5590, 6981 and 5591 respectively), the Gunnison River itself is the dividing line between Districts 59 and 62, as the river runs between the Town of Cimarron and the City of Gunnison.

1) More specifically, District 59 encompasses that portion of the Gunnison River Basin lying north and east of the Gunnison River (from a point near the town of Cimarron), and includes the drainages of the East River and the Taylor River.

2) District 62 encompasses that portion of the Gunnison River Basin lying generally south of the Gunnison River between the City of Gunnison and the Town of Cimarron, and also including the course of the Gunnison River through the Black Canyon to the boundary between the Counties of Delta and Montrose.

3) District 28 essentially encompasses the natural drainage of the Tomichi River (the eastern border of which drainage is the Continental Divide). The Tomichi River, after being intersected by its tributary, Cochetopa Creek, joins the Gunnison River at near the City of Gunnison. District 28 is bounded on its north side by District 59 and on its west side by District 62.

i. Although the decrees provide different and successive priority numbers to the individual features of the various units, each and every unit was declared of equal priority and each was awarded the same priority date of November 13, 1957. {Also see Exhibit 3061: the Water Tabulation of the Division Engineer for Water Division No. 4,

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[17] The Tomichi Unit included four projects: Ohio City Reservoir, Monarch Reservoir, Quartz Creek Canal and South Crookton Canal.

[18] The Cochetopa Unit included eight projects: Banana Ranch Reservoir, Flying M Reservoir, Upper Cochetopa Reservoir, Cochetopa Meadows Ditch Enlargement, Cochetopa Canal, Pass Creek Canal, Los Pinos Canal and Stubbs Gulch Canal.

and the testimony of said Division Engineer, Kenneth Knox, 10/24/97 Transcript, pp. 215-218]}

86. It is clear from reading the decrees for the Curecanti Unit and the Upper Gunnison Basin Project, that the findings contemplated uses and development of water within the Upper Gunnison Basin, and no mention is made in any of the decrees of any intention to develop water resources for trans-basin diversion. Further, the economic reports in 1959 and 1962 directly reference the five units within the Upper Gunnison Basin Project when concluding that a depletion allowance for the benefit of said units would not interfere with the operation of the Curecanti Unit. So the Court concludes that from the earliest considerations of a subordination of senior rights of the Curecanti Unit, the intent has always been to reserve a depletion allowance to prompt use and development within the natural basin of the Upper Gunnison River.

87. Having obtained decrees for the water rights to be assigned to the United States and to the Gunnison District, the River District engaged in discussions concerned with protecting the development of water resources within the basin. At several meetings, including one held July 18, 1961, [Exhibit 4036] concern was expressed that the proposed depletion allowance of 60,000 acre-feet would not be sufficient to satisfy development of water within the Upper Gunnison River Basin.

D.3 Assignment of Rights by River District to USA and Gunnison District

88. Upon issuance of the conditional decrees, River District on January 26, 1962, assigned the Curecanti Unit decrees to the United States of America [Exhibit 4049] and also assigned portions of the Upper Gunnison Basin Project relevant to this litigation (the East River Unit and the Ohio Creek Unit {including the Taylor River Canal}) to the Gunnison District [Exhibit 4046].

a. Initially the River District desired to include in the assignment language to the United States which would expressly preclude trans-mountain diversion of waters from the Upper Gunnison River Basin, [see Exhibit 4052, p. 3 which refers to 10/16/56 minutes of the River District]

b. However, the District reassessed this approach at its meeting on 1/26/62 and adopted a form of assignment which omitted such expressed language. [Lochhead, 10/24/97 Transcript, p. 126-127] A letter from John B. Barnard, the River District's counsel, to L. Richard Bratton, attorney for the Gunnison District, explained the negotiations the River District conducted with the BUREC in an effort to draft an acceptable form of assignment, and the rationale for not including an expressed prohibition against trans-basin diversions, which the Gunnison District desired. [Exhibit 4053]

89. However, the assignment from the River District to the United States of America dated January 26, 1962, did contain a limitation, to which the United States acceded in its acceptance of the assignment, which emphasized the intention of the parties to protect the development of water in the Gunnison River Basin. The condition reads as follows:

"This assignment is made by the District and accepted by the United States upon the condition that the water rights assigned will be utilized for the development and operation of the Curecanti Unit in a manner consistent with the development of water resources for beneficial use in the natural basin of the Gunnison River." [Exhibit 4049, p. 2]

90. At the October 1997 trial, Mr. Lochhead was asked on cross-examination whether the River District could obtain restrictions in its assignment to the United States which would limit the purpose or benefits of the federal statute [CRSPA] under which the Curecanti Unit was built. Mr. Lochhead answered that, in fact the River District did not do this, but that the assignment used was consistent with the legislation which authorized the Curecanti Unit and with the economic justification report which supported its operation configuration. [Lochhead, 10/24/97 Transcript, p. 133]

a. This testimony is consistent with other testimony by Mr. Lochhead, to the effect that through negotiations and analysis of the appropriate configuration for the [Curecanti] Unit, "arrangements were struck" which resulted in an understanding that 60,000 acre-feet would be subordinated to deal with potential impacts of the Unit to the Gunnison Basin.

b. In supporting his position that "arrangements were struck" regarding the subordination, Mr. Lochhead referred to "discussions between local interests, the River District, the United States, and the Water Conservation Board beginning in the late '40s." He also cited the economic justification reports of the BUREC and the documents relating to negotiations between the United States (and) the local interests over the project configuration, and the fact it is alluded to in the River District's assignment to the United States. [Lochhead, 10/24/97 Transcript, p. 121-122]

c. The Court accepts Mr. Lochhead's analysis as the findings of the Court on these issues.

91. In February 1962, the assignment was transmitted within the BUREC chain of command from the Regional Director to the Commissioner for approval. A letter of transmittal [Exhibit 4060] recommended acceptance of the assignment and referenced the following:

a. That a supporting letter was enclosed from the Colorado Water Conservation Board indicating that the assignment was consistent with Colorado policy.

b. That the River District had modified the form of assignment pre-approved by the Commissioner in June 1961 based upon concerns that the priority of the Curecanti filing would hinder future development of water resources within the basin. The Gunnison District was supportive of the modified assignment, although as the transmittal letter notes, members of the District [as the assignee of the participating projects, see **¶88 above**] had "pressed strongly for assurance that future operation of the Curecanti Unit would not interfere with [the upstream participating projects: Fruitland Mesa,

Tomichi, Cochetopa, Ohio Creek and East River] or other developments." [1st ¶ on p. 2 of Exhibit 4060]

c. That the assignment was consistent with the Commissioner's instructions in a letter of April 19, 1961, that it should contemplate "full beneficial use of water in the Gunnison River and without further conditions." In support of this conclusion, the Regional Director quoted the condition set out in ¶89 above.

d. In support of the modifications sought by officials responsible for the development of water resources within the Colorado and Gunnison River Basins and as a request for authority to negotiate specific operating agreements for depletion allowances, the Regional Director stated:

> "The objectives of the Upper Gunnison River Water Conservancy District to protect small non-Bureau water development projects against adverse Curecanti operations could be accomplished by agreements between the District and the United States to allow a specific depletion of the river for each development. Such agreements would be consistent with the Upper Colorado River Basin program objectives and would allow the local sponsors to obtain financing for construction without restriction by the Curecanti water right priority." [Exhibit 4060, p. 2, 3rd ¶]

92. On May 24, 1962, the Regional Director sent a letter [Exhibit 4064] to Mr. Philip Smith, secretary of the River District, indicating the Commissioner's approval of the assignment by the River District, and also authority from the Commissioner for the Regional Director to negotiate contracts for the depletion allowance as he had requested in his transmittal letter. [Exhibit 4060; see **¶91.d** above]

93. Based upon judicial notice of its own records, the Court notes here that following the River District's 1962 assignment to the Gunnison District of the conditional water rights for the Upper Gunnison Basin Project decreed in case 5591, the Gunnison District timely pursued diligence applications for said rights through the 1980's. However following a trial, this Court in case 88-CW-183 entered a Decree on May 30, 1991, which found a failure to prove diligence and the conditional decrees for the various rights for the Upper Gunnison Basin Project in case 5591 were dismissed.

## VI. FORMALIZATION OF THE BUREC's SUBORDINATION POLICY

### A. Initial Development of Subordination Policy

94. At the heart of this litigation is the issue of whether or not the BUREC has adopted a policy by which it would not call its senior rights for the Aspinall Unit as against applications by junior appropriators in the Upper Gunnison River Basin upstream of the Aspinall Unit; and if so how does it operate and who may benefit from it?

a. The policy at issue actually refers to a concept which contemplates a "depletion allowance" but throughout most of the history concerning the development of this concept, those discussing it in

correspondence and other documents have routinely denominated it to be a "subordination."

b. **The evidence in this case strongly supports the conclusion that the BUREC has intended to establish and implement a "subordination policy" with respect to the Aspinall Unit in the Upper Gunnison River Basin.** Thus, the Court specifically finds said intention on the part of the BUREC and answers in the affirmative, the threshold question posed in **¶94 above** on this point.

c. As a result, the questions to be addressed in the balance of this Decree on the "subordination" issue are:

1) What are the terms and conditions of the BUREC's policy, and can it be enforced?
2) Has the policy actually been effectuated?
3) And if so, is Arapahoe, as a junior appropriator in the Upper Gunnison River Basin, eligible to benefit from the BUREC's subordination policy?

A.1 Definition of Subordination and Related Terms

95. For the purposes of this Decree, the two terms: "subordination" and "depletion allowance" will be used interchangeably, but the meaning to be conveyed by either term is more fully defined as follows:

a. The term "**subordination**" itself refers to "the willingness of the owner of a senior water right to not place a call on the system on the river in deference to junior water rights." [Danielson, 10/20/97 Transcript, p. 66] For this case it means: "[W]here the Aspinall water rights will not be used to deny in-basin upstream junior appropriators the right to deplete the Upper Gunnison River system in the amount set for in the 1959 and 1962 economic justification reports." [Simpson, Transcript 10/24/97, p. 165]

b. However, the term "**depletion allowance**" actually has a more specific connotation which refers to the "consumptive use" permitted by the subordination. In other words, the senior water user who, by its "subordination" allows a junior water user to appropriate water without being subject to a call by the senior, agrees that the right to appropriate applies not only to the "diversion" of a certain quantity of water, but more precisely to the "depletion" (or "consumption") of a certain quantity of water. This distinction is very important in determining at what point any maximum limitation imposed by the subordination is reached; and it is significant that the BUREC considers its policy in this regard to refer to "depletions" rather than simply to "diversions."

c. Also important to this litigation is the concept of "**selective subordination**" which is defined as a "subordination" or "depletion allowance" through which a senior water user permits certain junior water users to appropriate water without being subject to an administrative call by the senior user, while at the same time denying such permission to other junior appropriators. [Danielson, 10/20/97 Transcript, p. 66] [Simpson, Transcript 10/24/97, p. 166]

Generally, because of its apparent "inequity," selective subordinations are not favored nor enforced. [Danielson, Id. 66] [Simpson, Id. 166, 185]. However, if appropriate prerequisites, through exchanges, plans of augmentation, contracts and similar methods, are satisfied then structured arrangements can be adopted to give legal effect to one a senior user's intention to make his priority inferior to a junior user's water right. Perdue v. Ft. Lyons, 184 Colo. 219, 223, 519 P.2d 954 (1974).

A.2 Quantification of Depletion Allowance

96. During the evolution of the CRSPA legislation, it was recognized that while the Curecanti Unit would provide significant benefits to the regulation of the Colorado River system and would enhance the development of water resources along the Gunnison River, nevertheless the placement of the Curecanti reservoirs, especially the Blue Mesa Reservoir, would inundate several miles of prime trout fishing streams and would adversely affect local property interests flooded by the Blue Mesa Reservoir which was to hold over 900,000 acre-feet of water. As a result, sportsmen and local ranchers and other residents strongly protested the loss of these attributes and insisted that if the Unit was to be built, then compensatory benefits would have to be granted to redress the losses.

97. One of the approaches taken to ameliorate the adverse affects of the Curecanti Unit itself was to include in the CRSPA legislation various participating projects which have been previously described in this Order. [See: **¶¶73, 74, 75.c above**] The 1956 Status Report, and the 1959 and 1962 economic justification reports for the Curecanti storage unit recognized said participating units would require 60,000 acre feet of water to be developed within the basin. [Exhibit 3094, 4021 (& 182) and 4062] [See: **¶¶71.f & 75 above**] There were five projects particularly (Fruitland Mesa Unit, Ohio Creek Unit, East River Unit, Tomichi Unit, and Cochetopa Unit[19]) which were integrated features commonly referred to as the Upper Gunnison Basin Project. All of these five projects were designed and intended to develop water resources for use within the Upper Gunnison River Basin when the River District made application for their conditional decrees. [See: **¶¶84, 85, 85.g above**]

98. The United States' acceptance of the River District's assignment in the spring of 1962, included authority for the BUREC to negotiate contracts to recognize depletion allowances which the BUREC was willing to grant for development of the Upper Gunnison Basin Project rights. [Exhibit 4064] Because of its responsibility for development of the Upper Gunnison Basin Project rights by virtue of its receipt of said rights by assignment from the River District, the Gunnison District was

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[19] The name "Cochetopa Unit" does not appear in the initial legislation or the studies leading up to adoption of CRSPA, but the designation began to be used by the River District when it made application for water rights in case 5591; and the Court believes that by virtue of the location of its 12 sub-features on Cochetopa Creek (a tributary of Tomichi Creek), it is properly included within the overall concept which anticipated development of the Upper Gunnison Basin.

appropriately and closely involved in discussions relating to the BUREC's depletion allowance for said rights. Thus discussions included the following:

a. Minutes from meetings of the Gunnison District demonstrate a number of discussions between the members of the boards for the District and the River District and officials of the BUREC concerning the need and expectations of local water users for development of the Upper Gunnison River once the Curecanti Project was constructed.

b. Opinions expressed by local interests generally indicated that they believed 60,000 acre feet would not be enough for full development of the upper basin, especially if the water needed for the Fruitland Mesa Project was included. {See: the minutes of the Dpper Gunnison's meetings of June 19, 1962 [Exhibit 4068] and of November 1, 1962 [Exhibit 4070]. Also see the letter of December 18, 1962, from Mr. Jennings, BUREC Project Manager in Grand Junction to the Regional Director [Exhibit 4074].}

99. On February 7, 1963, F. M. Clinton, as Regional Director, sent a letter [Exhibit 4075] to the BUREC Commissioner for the purpose of submitting a form of contract to be used in allocating a depletion allowance to protect junior water users in the Upper Gunnison River Basin against calls by the Curecanti senior water rights.

a. Mr. Clinton's letter included a proposed draft of a contract and a draft of a transmittal letter to be approved by the Commissioner before being sent to the Gunnison District. [Exhibit 4076]

b. The letter also acknowledged the concerns of the Gunnison District that the proposed depletion allowance of 60,000 acre-feet did not appear to be sufficient, but Mr. Clinton also observed that there was a lack of existing data to support development above 60,000 acre-feet at that time. In Mr. Clinton words:

"The district has agreed to Article 4 as now worded, only, 'Upon the assurance of the Bureau of Reclamation that the use of the attached contract would be an interim measure which would allow continued water resources development within the Upper Gunnison River Basin pending completion of a more accurate survey of available water in said basin and upon the further assurance that upon the completion of survey the United States will continue to promote future water resources developed within the confines of the Upper Gunnison River Basin by waiving its priority for said upper basin water users to the use of water under the decrees set out in paragraph 3 of said contract in an amount to be determined by the United States, but in any event, shall allow not less than 60,000 acre-feet of depletion above the Blue Mesa Reservoir, including the depletion caused by the Fruitland Mesa Project which is now estimated at 29,000 acre-feet of water.'"

100. Mr. Clinton's 2/7/63 letter is one of the earliest sources of the BUREC's position that its subordination (or depletion allowance) policy would require **three** criteria: 1) that BUREC will allow a depletion of 60,000 acre feet, 2) to upstream juniors for development in the Upper

Gunnison Basin, and 3) a contract is necessary in order to effectuate that depletion allowance. [See Exhibit 4075 and the testimony of Ms. DeAngelis. [DeAngelis, 10/23/97 Transcript, p. 69]

101. In response to Mr. Clinton's letter, the Commissioner sent a Speedletter of 6/23/63 which approved the draft contract and draft transmittal letter. By said letter the Commissioner authorized the Regional Director to execute contracts permitting assignment of not more than 60,000 acre-feet of water. He also stated in contravention of the concerns by the Gunnison District, that this limitation was to include the Fruitland Mesa Project water, but that when the full amount of the allowance was assigned, the BUREC would be willing to consider the "desirability of issuing additional contracts." [Exhibit 4078]

102. In a letter to Mr. Bratton as attorney for the Gunnison District dated July 16, 1963, the Regional Director, using the transmittal letter and form of contract approved by the Commissioner, informed the District of the BUREC's approval of the form of contract and the adoption of 60,000 acre feet as a maximum subordination amount. The Regional Director also noted the BUREC's willingness to study potential enlargements of that amount. [Exhibit 4079]

### A.3 Use of Contracts

103. As already noted above it is clear that in the development of its depletion allowance policy, the BUREC anticipated that contracts would be used to implement the allowance. [**¶¶100 & 101**] In this regard, the Court finds that the form of the contract [Exhibit 4076] approved by the Commissioner contained the following terms and provisions:

a. It was recognized that operation of the Curecanti Unit would permit future upstream water depletions "by projects constructed for the use of water in the Upper Gunnison Basin in the aggregate amount to be determined by the United States even though such projects divert under priorities subsequent in time to the priorities of the Curecanti Unit water rights."

b. The contract includes space in which to identify and describe the junior water interest and to quantify the maximum amount of the diversion (as opposed to depletion) of water anticipated by the contractor. Further, if the contractor ultimately used less water than provided in the contract, then the contract would be automatically amended to reduce the maximum diversion right.

c. The United States retained the right to terminate the contract if the contractor failed to initiate and pursue his project within 5 years after the date of the contract.

d. Because of the Gunnison District's ownership of the conditional water rights for the Upper Gunnison Basin Project, the contract also required approval by the Gunnison District. [This provision appears in the first three contracts which were executed in February 1964, [see Exhibits 4086, 4087 and 4090], but it is omitted from a subsequent contract executed in December 1965. [See Exhibit 4099]

104. At the 1997 trial an issue was raised as to the propriety of a condition which gave the Gunnison District a veto power over approval of a subordination contract between the BUREC and a junior appropriator. In response to a question on cross-examination on this point, Mr. Lochhead gave a good "lawyer-like" answer by saying that such a condition "would depend upon the overall circumstances." [Lochhead, 10/24/97 Transcript, p. 135] But he recognized that currently discussions regarding effectuation of the BUREC's subordination policy are ongoing, and he testified that a veto for the Gunnison District is not being considered in those negotiations.[20] [Lochhead, 10/24/97 Transcript, pp. 142-143.]

A.4 Revisit Quantification Issue

105. Based upon the authority granted in the Commissioner's Speedletter of 6/23/63, contracts were executed by "contractors" in February 1964 and were approved by the BUREC in July 1964, for commitments totalling 4,773 acre feet. [Exhibits 4086, 4087 and 4090] {Another contract (with Meeks) was executed in September 1965, and was approved by the BUREC in December 1965. [Exhibit 4099]}

106. In July 1964, when he approved the 1964 contracts mentioned in ¶105 above and returned them to the BUREC project manager in Grand Junction, the Regional Director stated that approval of additional contracts would have to be carefully considered because it appeared that the 60,000 acre-feet limitation established by the Commissioner was in danger of being used up. To support this view he noted that 28,100 acre-feet were being allocated to the Fruitland Mesa Project, and 31,800 acre-feet would be needed for the comprehensive development of the Upper Gunnison Project (which included the East River, Tomichi Creek, Ohio Creek and Cochetopa Creek). [Exhibit 4088]

107. In a response to the Regional Director on July 24, 1964, the Grand Junction Project Manager, Mr. Jennings stated that the cap of 60,000 acre-feet was "a purely arbitrary figure" (not supported by fact) and that "it is certainly wrong to assign all of this depletion to the Fruitland Mesa Project." He went on to acknowledge, however, that the Commissioner's letter was specific with reference to the total amount of water for which the Regional Director is authorized to execute contracts. Mr. Jennings recommended that a letter be sent to the Commissioner for clarification of the fact that the 60,000 acre-feet cap should refer to "depletions" and that if adjustments are not made, then the two projects (Fruitland Mesa and the Upper Gunnison) would stop all private development in water resources above the Curecanti Unit. He also suggested that approval of contracts for private development should continue until final studies are completed which ascertain the scope and magnitude of depletions for the Upper Gunnison Project. [Exhibit 4089]

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[20] From the fact that the Gunnison District's Upper Gunnison Basin Project (which was to be the beneficiary of the depletion allowance) no longer exists, the Court draws the inference that the need for the Gunnison District to be directly involved in the contracting process no longer remains, but this issue must be left for further discussions among the parties.

108. On August 7, 1964, the Regional Director, Mr. Clinton, wrote to the Commissioner reiterating the concerns raised by Mr. Jennings in his letter of July 24, 1964, and recommending that the Regional Director be permitted to continue to execute contracts with private interests for water under the depletion allowance. [Exhibit 4091]

109. The Commissioner responded in a letter of August 20, 1964, and authorized the Regional Director to continue to execute contracts directing that the 60,000 acre-feet cap would remain in place, but recognizing that it is "used for stream depletion in the power operation studies for Curecanti Unit" and if approved depletions exceed the 60,000 acre-feet cap, then a reappraisal of the power output of Curecanti Unit and of the effects on Colorado River Storage Project payout should be incorporated in or accompany [the Regional Director's] feasibility report on the Upper Gunnison River Basin Project." Based upon that information, the Commissioner could then determine whether or not to approve stream depletions in excess of the 60,000 acre-feet cap. [Exhibit 4092]

## B. Status of Subordination Policy in 1980's

### B.1 Upper Gunnison River Basin is Over-Appropriated

110. For nearly 20 years (which includes the period of time for the Curecanti project to be fully constructed and for its rights to be made absolute) there was little activity which required analysis of the Bureau's subordination policy. [DeAngelis, 10/24/97 Transcript, p. 29] However, in the early 1980's, the State Engineer and the Division Engineer for Water Division 4 were treating all tributary waters (both surface and ground water) in the Upper Gunnison Basin as over-appropriated based primarily upon the construction and completion of the Curecanti [Aspinall] Unit. [Simpson, 10/24/97, p. 174, 194].

a. The over-appropriation classification for the Gunnison Basin applied "above Crystal [Dam] because of the Curecanti process. [Danielson, 10/20/97 Transcript, p. 81]

b. Further the designation of "over-appropriation" did not include consideration of conditional water rights. [Danielson, 10/20/97 Transcript, p. 140]

c. Further, the Court finds that during Dr. Danielson's tenure as State Engineer (from 1979-92) he took the position that the Aspinall hydropower water rights were not entitled to exercise an administrative call against upstream junior rights. [Danielson, 10/20/97 Transcript, pp. 125-126] From this, the Court draws the inference and concludes that said rights were not considered by him when he designated the Upper Gunnison Basin to be over-appropriated in the 1980's. Therefore, it appears that even without factoring in the Aspinall Unit's hydropower rights, and in the absence of the BUREC's subordination, Dr. Danielson considered the Upper Gunnison Basin to be over-appropriated during the period when Arapahoe's applications were filed in 1988 and 1990. Given this conclusion, the Court also concludes that the interpretation of 43 U.S.C. §620f vis-a-vis said hydropower rights is immaterial in this litigation.

d. In all events, in the early 1980's the Gunnison River above the Aspinall Unit was placed on "critical stream list" for the purpose of expediting the evaluation of applications for well permits. [Danielson, 10/20/97 Transcript, p. 101-102, and 140] He ordered this designation because the Aspinall Unit was so large, its rights "would have obviated the ability of anyone [surface or groundwater applicants] to divert if [the BUREC] exercised those calls, at least at certain periods of each year." [Danielson, 10/20/97 Transcript, p. 141.]

111. The "critical stream list" is developed by the State Engineer's Office to identify streams and basins "where, due to local circumstances, there was no unappropriated water available but in the overall basin there was unappropriated water." [Danielson, 10/20/97 Transcript, p. 81 and 101] [see also: [Knox, 10/24/97 Transcript, p. 213] The lists are used to evaluate groundwater applications, the test being that if a stream to which the groundwater is tributary is on the list, then the application would be denied. [Id. p. 101]

112. The issues of the "over-appropriated stream" status of the Upper Gunnison River and the import of the subordination policy of the BUREC were brought into focus by a number of applications by applicants for tributary ground water in locations above the Blue Mesa Reservoir. An early filing [Case No. 81-CW-307 in this court], was made by the City of Gunnison seeking permits for seven large (500 gpm) high capacity wells. Four were denied. [Knox, 10/24/97 Transcript, p. 215]

## B.2 The BUREC's Subordination Policy Vis-a-vis the Condition of Over-Appropriation

113. The September 27, 1993 Meeting arranged by the Water Referee: Confronted with the prospect of denials of groundwater permits, water users in the Upper Gunnison Basin were very upset to learn that the State Engineer considered the Aspinall water rights to make the basin over-appropriated, because they had believed that they were protected by the BUREC's subordination policy. [Simpson, 10/24/97, pp. 174-175]. Because of these concerns about the impact of the Aspinall Unit on the Upper Gunnison Basin, the Court's Water Referee, Aaron Clay arranged a meeting of interested persons which was held September 27, 1983. [Id. p. 175] Those attending included a number of local water users from the Gunnison Basin and representatives of the Bureau of Reclamation [including then Regional Supervisor, Wayne Cook] as well as the State Engineer [Mr. Danielson], the Assistant State Engineer [Hal Simpson] and the Division Engineer [Ralph Kelling]. [See Exhibit 4108 for a complete list of attendees.] The purpose of the meeting was to discuss the ramifications of the Bureau's subordination policy vis-a-vis the applications for well filings. [Exhibit 4108] In this regard the following positions were expressed:

a. It was recognized that the Gunnison River was over appropriated and that water would be available to junior users only through the BUREC's subordination or a contract sale or exchange.

b. The State Engineer ask if the BUREC intended to subordinate their rights or if they wanted him to administer them in priority.

This request made during the September 1993 meeting was eventually followed up by a letter dated January 5, 1984, from Ralph Kelling, Dr. Danielson's Division Engineer in Water Division No. 4, to Boyd Holt, Chief Operations Manager for the BUREC in Grand Junction seeking a letter of policy regarding the BUREC's subordination policy, so that the Division Engineer's office could remove its "over-appropriated stream" status when evaluating "small capacity wells in the Upper Gunnison area." [Exhibit 4116]

c. Mr. Cook, for the BUREC, responded that the BUREC would have to address the issue of water depletion with other agencies [including the UVWUA, the River District, the Gunnison District and the Colorado Water Conservation Board] before making a decision. However, he did confirm that as an interim policy the BUREC would issue contracts for upstream development and for certain exchange purposes.

d. Further, the State of Colorado indicated that it would not interpose an objection to such contracts for depletions up to 5,000 acre feet.

114. At its meeting in November 1983, the Colorado Water Conservation Board, as a state wide water policy agency, discussed the BUREC's subordination issue directly. During the meeting, the Board's director, Mr. McDonald, reviewed the history of the subordination and its purpose was to alleviate concerns that construction of the Aspinall Unit would preclude upstream development in the Upper Gunnison River Basin. The Board unanimously approved the concept of subordination and directed the State Engineer, the Gunnison District, and the River District to continue negotiations with the BUREC to consummate an agreement for the subordination of up to 60,000 acre-feet of Aspinall water for consumption in the Gunnison River Basin (with an unspecified quantity to be reserved for the Fruitland Mesa Project). [Exhibit 4113, pp. 14-15] James S. Lochhead (a witness at the present trial) attended that meeting.

B.3 BUREC Position re Subordination in 1984

115. Fully aware that the State Engineer and the Division Engineer for Water Division 4 [see ¶113 above] desired some action by the BUREC to formalize its subordination policy, the BUREC initiated some steps in early 1984 to have the policy adjudicated, but eventually (in the fall of 1984) the BUREC concluded that it was unnecessary to pursue a formal court decree to approve the policy. The following correspondence reviews the process pursued by the BUREC:

a. **On February 16, 1984**, Bureau of Reclamation **Mr. Barrett sent correspondence to John Hill** of the U. S. Attorney's Office with a proposed application asking that the same be filed to adjudicate the subordination policy. [Exhibit 3043/4118] This was a comprehensive letter detailing history of the subordination policy and reiterates a policy for a depletion allowance for 60,000 acre-feet and acknowledged on the basis of the language in the assignment from the River District to the United States [Exhibit 4049] that it could be utilized for "upstream development even though the assigned rights may be prior to the rights connected with said upstream development (that is the Upper Gunnison Basin Project)." Mr. Barrett also stated

that the subordination would allow continued development of the Upper Gunnison Basin in accord with the Upper Colorado River Basin Compact of 1949, and "[i]t is consistent with our treatment of water rights for Flaming Gorge and Glen Canyon."

¶115 b. In March and April of 1984, Mr. McDonald as director of the Colorado Water Conservation Board, corresponded with Mr. Barrett of the Bureau of Reclamation seeking clarification of the Bureau's subordination policy. Mr. Barrett replied to Mr. McDonald on April 12, 1984, indicating that the Bureau's position with respect to the Curecanti Unit was consistent with its treatment of water rights or other projects including Flaming Gorge and Glen Canyon. In this regard, the letter makes reference to the fact that the BUREC has not been protesting water applications for inflows to the Flaming Gorge and Glen Canyon Reservoirs.

c. At the 1997 trial, Ms. DeAngelis testified that contracts were necessary to implement the BUREC's subordination policy above the Aspinall Unit, but that contracts were not required for the development of water above Flaming Gorge and Glen Canyon. On cross-examination, she was asked to explain the apparent inconsistency in light of Mr. Barrett's letter referred to above. Her testimony to explain the distinctions was as follows [DeAngelis, Transcript 10/23/97, pp. 191-197] and the Court finds the same to be true in this case:

> 1) the BUREC is taking the extra precaution of utilizing contracts to protect its state water rights decreed to the Aspinall Unit and said efforts are not necessary with respect to its rights in Flaming Gorge and Glen Canyon because said rights are not state decreed. [DeAngelis, Transcript 10/23/97, p. 194]
>
> 2) the BUREC has not adopted a depletion allowance policy with respect to the water rights above Flaming Gorge and Glen Canyon as it has for the Aspinall Unit. [DeAngelis, Transcript 10/23/97, p. 195] [Also see Lochhead, 10/24/97 Transcript, p. 144]
>
> 3) The Court has reviewed Mr. Barrett's letter and BUREC correspondence generally during 1983-84 on the subordination issue. The Court finds that when he wrote the letter of 2/16/64 to Mr. Hill, Mr. Barrett began by noting that some 1983 filings by junior appropriators (for small wells) had elicited BUREC protests. The Court concludes that with that situation particularly in mind, Mr. Barrett was indicating that the BUREC's subordination policy would relieve its need to oppose the small well applications; and this result would be consistent with the BUREC's position that it does not protest water rights' applications filed for water above Flaming Gorge and Glen Canyon. This conclusion is supported by Ms. DeAngelis' testimony. [DeAngelis, Transcript 10/23/97, p. 197]

d. In the early summer of 1984, the BUREC's Regional Director received inquiries from various agencies, including the United States Fish and Wildlife Service and the Colorado Department of Wildlife regarding the BUREC's intent to subordinate 60,000 acre feet from the Aspinall Unit. The Regional Director responded to both of these

agencies on August 23, 1984, by providing a brief history of the water rights for the Aspinall Unit, and noted that the Colorado Water Conservation Board had formally supported the subordination of 60,000 acre-feet of depletions of Aspinall water to allow development of upstream junior water rights. He stated that the BUREC had in effect subordinated Aspinall water rights by not making a call for those rights during periods of shortage. He also stated that he viewed the subordination as a "requirement" of the River District's assignment of the water rights to the United States. He further expressed the opinion that the subordination did not invoke the provisions of the National Environmental Policy Act; but suggested that compliance with said Act and the Endangered Species Act might be necessary under circumstances where the sale of water by the BUREC in its execution of a water service contract constituted a major Federal action. **[Exhibit 4124: the response to USF&WS and Exhibit 4125: the response to Colorado DOW]**

¶115 e. By September, 1984, Mr. Danielson had not received any communication from the Bureau pursuing the application so he wrote a letter to Mr. Barrett asking for an update of the Bureau's position. [Exhibit 3043-4118]

f. On September 13, 1984, Mr. Hill wrote a letter to Mr. Danielson indicating that the Bureau was doing further investigation of its authority to subordinate, and that until it actually filed appropriate papers in the water court for the subordination, the Bureau had "no intent to request administration of its rights as against applicants in the Upper Gunnison." [Exhibit 3049/4128] In response to this letter, Mr. Danielson wrote a letter dated September 26, 1984, replying to Mr. Hill and stating that he was pleased by the decision of the Bureau of Reclamation to actually subordinate the rights of the Aspinall Unit. Dr. Danielson also retracted his recommendation that the BUREC file for a change of water right, and instead recommended that it simply file a Notice of Intent to Subordinate Certain Water Rights and have the same published in the resume. [Exhibit 3050/4130]

g. A few weeks later a **Memorandum from the Bureau's Regional Solicitor** to its Regional Director dated **October 26, 1984**, [Exhibit 4131] indicating that Mr. Hill should not file any application to adjudicate the subordination because the BUREC's subordination policy was clearly documented and the BUREC fully intended to adhere to it. In his analysis to support this position, the Regional Solicitor recognized that the River District had assigned the Aspinall Unit's water rights to the BUREC in 1962, and he stated:

> "Your [Regional Director's] files disclose the intent of the United States at the time it accepted this assignment, and also the intent of the Colorado River Water Conservation District. These file documents taken as a whole show that the United States has an obligation to allow junior appropriators, upstream of the Wayne Aspinall Unit (Curecanti Unit), the use of water in an amount not to exceed 60,000 acre feet. Upstream water development would be exclusively for the Upper Gunnison Basin and no trans-basin diversion would be allowed." [Exhibit 4131, p. 1]

* * *

"As early as 1959 Congress was advised by the Secretary that depletions in the Gunnison River upstream of the Curecanti Unit in the amount of 60,000 acre feet were contemplated. House Document No. 201, 86th Cong., dated July 15, 1959, p. 15."

"We see no reason to initiate any court action in behalf of the Bureau of Reclamation in this matter and so advised Mr. Hill. * * * You should contact the State Engineer and inform him that the United States will live up to its obligations in connection with the January 26, 1962, assignment from the Colorado River Water Conservation District. This means that you will fulfill your obligation to allow upstream depletions in an amount not to exceed 60,000 acre feet; that the Bureau of Reclamation does not intend to take any action contrary to these obligations; and that the State Engineer, insofar as the Bureau of Reclamation is concerned, may administer upstream depletions in harmony with this position." {Emphasis supplied} [Exhibit 4131, p. 2]

h. Dr. Danielson acknowledged during his testimony at the 1997 trial, that he had received copies of both Barrett's letter to Hill [Exhibit 4118] and the Solicitor's Memorandum to the Director [Exhibit 4131] when he was talking with the BUREC and the Justice Department about the BUREC's subordination policy. [Danielson, 10/20/97 Transcript, pp. 89-90]

B.4 State Engineer Danielson's Memorandum of 11/15/84

116. After receiving the correspondence received from Mr. Hill and the Regional Solicitor's memorandum [Exhibit 4131], **State Engineer Danielson issued his own Memorandum on November 15, 1984.** [Exhibit 3053/4133]

a. In this Memorandum, he declared: "Administration of water rights above Crystal Dam and evaluation of permit applications for wells above Crystal Dam will be done as if the Curecanti [Aspinall] Unit water rights are the most junior water rights on the system and will not be considered to place any demand on the river." [Exhibit 4133]

b. As explanation of his reasons in issuing the Memorandum, Dr. Danielson testified at the October 1997 trial as follows: "[S]ince the Bureau had declined to seek a change of water right or some adjudication in the water court of the subordination, ... it was my intent to consider the Curecanti rights as the most junior rights on the river, and they would be administered in that fashion." [Danielson, 10/20/97 Transcript, p. 72] He also testified that in his view, this meant the subordination made water available to any junior appropriator, including trans-basin diverters above Crystal. [Id. 72]

c. In spite of the language in the correspondence received from Mr. Hill [Exhibit 3049/4128] and the regional solicitor's memorandum [Exhibit 4131], Dr. Danielson testified at the October 1997 trial that: "I neither sought nor obtained the consent of the United States [to subordinate]. I simply made an administrative decision." [Danielson, 10/20/97 Transcript, p. 83] He also acknowledged more than once

in his testimony that his objective was to force the BUREC to adjudicate its subordination policy through a court action which would bring all interested parties (from east and west slopes) into the court forum to get a final determination in an adversarial hearing.. [Danielson, 10/20/97 Transcript, pp. 94-95, 111] However, he also recognized during his testimony that the State Engineer has no authority to force a senior water user to subordinate his water rights. [Danielson, 10/20/97 Transcript, p. 113]

d. However, as noted above in ¶115.f above Dr. Danielson's own reply to Mr. Hill acknowledged that he was pleased that the Bureau had made the decision to subordinate. [Exhibit 3050/4130] Further, as part of his Memo of November 15, 1984, Dr. Danielson attached as the predicate for his decision the letter of the BUREC's Solicitor [Exhibit 4131] which Dr. Danielson interpreted to say that the BUREC was not going to seek a change of water right, but "it is clear that it intends to subordinate its rights above Crystal Dam up to 60,000 acre-feet per year of depletions caused by junior users." [Exhibit 3053] [Simpson, 10/24/97, p. 196]

e. In further analyzing the BUREC's subordination policy, Dr. Danielson testified that he did not understand the subordination to be limited to 60,000 acre-feet, although he did recognize that "the Bureau or any water user has the right to subordinate any amount they choose of their decree." [Danielson, 10/20/97 Transcript, p. 77] He also testified that he did not believe contracts were necessary for a junior to benefit from the subordination. [Id. 78]

B.5 State Engineer's Memorandum of 11/5/84 was Ineffective

117. Arapahoe asserts that this Court is bound by Dr. Danielson's Memorandum as a policy in existence at the time its applications were filed, and thus the Court must find that as a junior appropriator upstream of the Aspinall Unit, Arapahoe is entitled to benefit from the BUREC's subordination based upon Dr. Danielson's interpretation of it. That interpretation according to his testimony was that the subordination applies to all junior appropriators, whether for in-basin development or for trans-basin exportation and no maximum cap is imposed on the depletion allowance. [Danielson, 10/20/97 Transcript, p. 73, 77, 88, 90-94, 105, 138] Actually the Memorandum itself [Exhibit 4133] does acknowledge the 60,000 acre-foot limitation as referenced in the Regional Solicitor's Memorandum of 10/26/84. Thus, the Court must decide whether or not Arapahoe's position is valid, and this decision depends upon the efficacy of the Memorandum of November 15, 1984.

118. Having reviewed the evidence and the law in this regard, the Court concludes for the following reasons that Dr. Danielson's Memorandum of November 5, 1984, was ineffective and unenforceable to the extent that it would constitute a policy in effect in 1988-1990 and would therefore permit a junior water user to appropriator water in the Upper Gunnison River Basin for trans-basin exportation:

a. Certainly if, as Dr. Danielson testified [see ¶116.c above], he unilaterally declared the senior rights of the Aspinall Unit to be junior to all other junior appropriators upstream of the Crystal Dam,

then the Court must find that his Memorandum is without legal effect. Whether to subordinate a water right is up to the owner, not the State Engineer. [Simpson, 10/24/97, p. 166-167] Dr. Danielson acknowledged this in his own testimony by stating that the State Engineer has no authority to "force another senior water right user to subordinate." [Danielson, 10/20/97 Transcript, p. 113]

¶118 b. Assuming, however, for the purposes of complete analysis, that Dr. Danielson's Memorandum rested on "consent" from the BUREC, then the Court must conclude that he had to enforce the subordination under the terms and conditions imposed by the BUREC, if it did not constitute a selective subordination.

1) A fair reading of the Regional Solicitor's memorandum of 10/26/84 demonstrates that he considered the subordination to be limited to 60,000 acre feet and for in-basin use only. Given this limited consent by the Regional Solicitor, Mr. Danielson's authority to treat the Aspinall Units as junior to all other rights in the basin would be similarly limited to a quantity of not more than 60,000 acre feet and solely for the benefit of applicants seeking to appropriate for in-basin development only. The consent of the Regional Solicitor did not extend beyond that.

2) If the State Engineer believed this was a selective subordination, not authorized by state law, then he could not administer the subordination at all. The Court finds no authority for the State Engineer to disregard the BUREC's expressed intent to limit the subordination to in-basin use, and to assume that the subordination should apply to all junior appropriators, regardless of where they intended to use their diversions.

3) In his testimony during the October 1997 trial, the present State Engineer, Hal Simpson expressed the view that Dr. Danielson had no statutory authority to ignore a priority determined by the water court and to deem a senior right to be the most junior in the basin without a court decree. [Simpson 10/24/97, pp.177, 201]

c. In addition, Mr. Simpson testified that in spite of the Memo of 11/15/84, the state engineer's office did not change how it treated over-appropriated streams. At best the memo was limited in its application to the determination of whether or not unappropriated ground water was available in considering new well permit applications. [Simpson, 10/24/97, p. 195-196]

d. Further, no action was taken to modify the official tabulation lists in Water Division 4 to reflect the subjugation of the Aspinall Unit's senior rights to the most junior in the basin. [Knox, 10/24/97 Transcript, p. 218]

## C. 1990 Correspondence Bearing on the BUREC Subordination Policy

### C.1 BUREC Letters Responding to Congressional Inquiries

119. The Court finds that there is some correspondence with BUREC officials in 1990 which helps to understand the policy of the Bureau

which was applicable during the period when the applications in this case were filed (from 1988 to 1990). Two of these letters are informative:

¶119 a. **Letter to Senator Wirth:** On March 15, 1990, the BUREC's Regional Director in Salt Lake City replied to a letter of March 2, 1990 from U.S. Senator Timothy E. Wirth [Exhibit 4139] who had asked several questions regarding the BUREC's intentions regarding the exercise of its water rights for the Aspinall Unit vis-a-vis Arapahoe's project for the Union Park Reservoir. After giving some background regarding the federal laws governing the Aspinall Unit, the Director responded that when the Aspinall Unit was constructed it was the BUREC's intent to subordinate its water to "60,000 acre-feet of in-basin depletions." The Director then acknowledged that while this intent remains the BUREC's position, it is actually up to the Colorado State Engineer to administer the subordination in a manner consistent with state law. As will be addressed later in **§C.3 below**, the Director also recognized that the Aspinall Unit has water for sale, and that upon execution of "a water purchase contract" and compliance with NEPA, Arapahoe could purchase the water and export it out of the Gunnison River Basin. [Exhibit 4140]

b. **Letter to Congressman Miller:** A letter, similar to the one above, was sent on November 4, 1990, by Dennis Underwood, as Commissioner of the BUREC, in answer to a letter of September 27, 1990, from Congressman George Miller, Chairman of the Subcommittee on Water, Power, and Offshore Energy Resources of the U.S. House of Representatives. In his letter, Commissioner Underwood recognized that certain federal projects (the Upper Gunnison Basin Project) which had originally been the basis for adoption of the "subordination" policy were not going to be built. He stated local interests (in the Gunnison River Basin) then requested that the BUREC honor the spirit of the subordination and allow private development to occur without fear of being called out by Aspinall's senior rights. He explained that a contract was approved to grant that request, and it contemplated that the BUREC would "permit future upstream water depletions by projects constructed for the use of water in the Upper Gunnison Basin. . . ." [Exhibit 4144, p. 1-2] He also specifically stated:

> "In the early 1980's, the State Engineer of Colorado, who had received numerous requests for well permits in the Upper Gunnison drainage, asked Reclamation to formally declare the 60,000 acre-feet subordination so that he could approve the well applications. Reclamation informed the State engineer of its intent to so subordinate. We realized that although the original intent was to allow development to take place within the basin, it would be up to the State engineer and State law as to how the subordination would be administered. In the ongoing litigation, the Colorado Water Court has ruled that no subordination can take place without a contract." [Exhibit 4144, p. 2]

C.2 Relevance of 1990 BUREC Letters to the Application Periods

120. The two letters above were written to members of Congress prior to the November 1990 filing of Arapahoe's Amended Application and state

the BUREC's policy existing within the study period which all parties agreed must be used to analyze both of Arapahoe's applications. Further, by their terms, the two letters demonstrate that the policy stated in each has been consistently recognized as the BUREC's subordination policy since it was originated in the early 1960's. Thus the following findings and conclusions are supported by the summary of said policy found in each of the two letters:

¶120 a. The Court recognizes that the participating projects in the Upper Gunnison Basin which were expected to benefit from the subordination will not be constructed because the conditional decrees for the same have been dismissed. However, the Court finds on the basis of the above letters that the BUREC has agreed "that the 60,000 acre-foot of subordination would apply to future public and private in basin uses." This finding is also supported by the testimony of Mr. Simpson, the present State Engineer. [Simpson, 10/24/97, p. 204]

b. Further, the Court is satisfied from reading the BUREC documents and correspondence over the last 30 years (many of which are cited in this Order) that the BUREC is committed to a policy under which it will withhold a call of its senior rights against junior appropriators with respect to 60,000 acre-feet of water for depletion and consumptive use within the Gunnison River Basin, so long as there is a contract in place to recognize the junior water user's right to rely on said agreement.

c. The Court is aware that the BUREC has also recognized, as clearly stated in the two letters above, that the actual administration of the subordination rests in the hands of the State Engineer. The Court understands Arapahoe's position on this point to be that the BUREC is essentially offering to subordinate, and the State Engineer is given the ultimate discretion to administer the subordination in a valid manner, meaning that he could remove the restriction limiting it to "in-basin users" only in order to avoid a selective subordination, and then make it available to all junior appropriators, both in-basin and trans-basin users.

d. However, the BUREC has made it very clear that the foregoing position is not consistent with its intent to establish the subordination. Further the BUREC has been emphatic in maintaining that if the State Engineer cannot administer the subordination for in-basin use only, then the BUREC will withdraw or revoke the subordination altogether. [DeAngelis, 10/23/97 Transcript, p. 199-202, 209; and 10/24/97 Transcript, p. 11-12]] The BUREC appears to be adamant on this point because it views its understanding (of some 30+ years) with the Districts as an "obligation" to assure junior appropriators seeking to develop the Upper Gunnison Basin that at least 60,000 acre-feet of water is available for such development. Such is the tenor of the Regional Solicitor's Memorandum of 10/26/84 [Exhibit 4131] which set the stage for State Engineer Danielson to issue his 11/15/84 Memorandum.

e. With respect to the foregoing issue addressed in **sub-paragraphs 120.c and 120.d above**, if a State Engineer believes that a

a senior water user is seeking to utilize a selective subordination, his only recourse is to refuse to enforce it, rather than electing to enforce it under terms which violate the intent of the senior water user. Thus, the Court concludes that Arapahoe's position as outlined in **¶120.c above** is incorrect.

C.3 BUREC'S Water Available for Sale

121. **Trans-basin appropriators may benefit from the marketable pool of water which is available from the Aspinall Unit:** An important subject of the 3/15/90 letter from the BUREC Regional Director to Senator Wirth was the fact that the Aspinall Unit has water for sale. [Exhibit 4140]

a. In his inquiry letter of March 2, 1990, Senator Wirth had asked whether or not the BUREC believed it had authority to contract with Arapahoe County for water or storage space in the Curecanti [Aspinall] Unit or Taylor Park Reservoir which could support a trans-basin diversion project. [Exhibit 4139]

b. The Regional Director replied by confirming that the BUREC has authority to contract with any governmental entity in the state of Colorado for the purchase of water available in the Aspinall Unit, but that the BUREC would not sell storage space in its reservoirs.[21] The Director also noted that the entire water supply and storage of the Taylor Park Reservoir was already under contract with the UVWUA and thus the BUREC would not be willing to consider the sale of water or storage from that reservoir. [Exhibit 4140, p. 2] The Director was very explicit in affirming the BUREC's subordination policy for in-basin use only, and that no water was available to Arapahoe except what it could purchase under a contract. [Exhibit 4140, p. 2-3]

c. The Court finds that the BUREC has a marketable yield of 240,000 acre-feet of stored water for sale to water users throughout the state. This Court held in its Order of November 5, 1996, on certain C.R.C.P. 56(h) Motions, and it reaffirms said holding now, that the water represented by this pool has been utilized by the BUREC for multiple purposes. [See: **¶14.c.5, p. 9 of this Order**] Thus, although only 78 acre-feet of the water is presently under contract, the balance is not available for appropriation because of the water's historic use for the variety of purposes for which the water rights of the Aspinall Unit have been decreed. [Order Re C.R.C.P. 56(h) Motions for Determination of Questions of Law, entered on November 5, 1996; see pages 10-11.]

## VII. INTERPRETATION OF THE SUBORDINATION POLICY

### A. Findings re Elements of BUREC's Subordination Policy

122. Based upon a preponderance of the evidence presented at the 1997 trial, the Court finds that the most basic elements of the subordination

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[21] As authority to sell water from the Unit, the Regional Director cited the Reclamation Act of 1939 (PL 260, 8/4/39) and the Colorado River Storage Project Act (PL 485, 4/11/56). [4140] Also see Commissioner's 11/4/90 letter. [4144]

policy which the BUREC intends to implement include a maximum depletion allowance of 60,000 acre-feet, for the use of junior appropriators who will apply the water for beneficial uses within the Upper Gunnison River Basin above the Crystal Dam, and that the junior appropriator must have a contract with the BUREC to implement the policy. The BUREC leaves it to the State Engineer to determine whether a court decree approving the subordination is necessary, but it appears that the State Engineer will require a decree from the water court as a prerequisite to administration of the subordination.

123. In support of these findings, the Court further finds by a preponderance of the evidence based upon the testimony at the 1997 trial of the witnesses and from the documentary evidence presented, and based upon applicable, concludes as follows:

A.1 Quantification

124. **As to "quantification" of the depletion allowance, the Court finds that the allowance would be not more than 60,000 acre-feet of water [limited to 40,000 acre-feet above Blue Mesa Dam] for actual depletion by upstream users of water rights junior to the Aspinall Unit. The BUREC has expressed a willingness to re-evaluate this limit if the need arises, but no assurance has been given that an increase would be approved.** To support these conclusions on "quantification" the Court finds as follows:

a. Although he testified that he believed that the BUREC's depletion allowance was not limited to 60,000 acre-feet because it could subordinate in any amount it desired, **Dr. Danielson** acknowledged that the BUREC's intent expressed in its correspondence was to use 60,000 acre-feet as an initial maximum. [Danielson, 10/20/97 Transcript, pp. 77, 90-91, 138]

b. In his deposition testimony in February 1990, **Mr. Wayne Cook** was agreed that the BUREC expected the quantity of the subordination to be limited to 60,000 acre-feet. [Cook, 2/21/90 Deposition, pp. 123, 130, 141, 149]. Further, he emphasized the BUREC's commitment to the subordination concept and the fact that the BUREC should not do anything to jeopardize its implementation. [Cook, 2/21/90 Deposition, pp. 143-144] Mr. Cook further testified that when the 60,000 acre-foot limit is reached (as determined by the State Engineer), then the BUREC will begin exercising calls for administration to protect its senior rights. [Cook, 2/21/90 Deposition, pp. 150-151] Mr. Cook also testified in his 1997 deposition that the testimony he gave in February 1990 about the subordination was accurate. [Cook, 8/12/97 Deposition, p. 42]

c. After giving an extensive history of the BUREC's subordination (more correctly "depletion allowance") for the benefit of the Upper Gunnison River Basin above the Aspinall Unit, **Ms. Carol DeAngelis** testified that the BUREC's policy limited the depletion allowance to 60,000 acre-feet maximum. [DeAngelis, 10/23/97 Transcript, pp. 90, 98, 107, 190] She also emphasized that of the 60,000 acre-foot allowance only 40,000 acre-feet were available for depletion above Blue Mesa Dam. [DeAngelis, 10/23/97 Transcript, pp. 121 and 130] She also acknowledged that the BUREC Commissioner had expressed a

willingness to "revisit" the need to increase the 60,000 acre-foot restriction if an unusually large depletion was proposed or if increasing use of the depletion approached attainment of the limitation. [DeAngelis, 10/23/97 Transcript, pp. 108-109] [DeAngelis, 10/24/97 Transcript, pp. 16-18, 33] [Also see: Commissioner's letters of 6/23/63 (Exhibit 4078) and 8/20/64 (Exhibit 4092)]

d. **Mr. James Lochhead** also confirmed that the subordination contemplated an allowance for at least 60,000 acre-feet of consumptive use, recognizing that as the initial limitation of 60,000 acre-feet was approached or reached, that the BUREC would give consideration to the expansion of the limitation to allow for additional uses. [Lochhead, 10/24/97 Transcript, p. 74] He further noted that the allowance policy contained a sub-limitation in the sense that only 40,000 acre-feet would be available for depletion above Blue Mesa. [Lochhead, 10/24/97 Transcript, p. 77]

e. It was assumed for the purposes of **Mr. Hal Simpson's** testimony about the BUREC's subordination policy that the quantity of the allowance was 60,000 acre-feet. This was true both his discussion of the issue of selective subordination in the context of which junior appropriators (in-basin or trans-basin diverters) were eligible to utilize the depletion allowance. [Simpson, 10/24/97, pp. 165, 188, 191-92, 196]

A.2 Restricted to In-Basin Development

125. **As to the "place of use" the Court finds and concludes that it was the BUREC's intent to limit the depletion allowance to use solely within the Gunnison River Basin, and not to permit it to be exported out of that basin.** To support these conclusions on "in-basin use only," the Court finds as follows:

a. **Dr. Danielson's** testimony on this subject covered several aspects regarding the limitation of the subordination to preclude trans-basin diversions.

1) In portions of his testimony, Dr. Danielson took the position that the BUREC had not expressed the intention of limiting the subordination to "in-basin uses." In this regard he noted that some BUREC documents indicated that the subordination was for the benefit of junior water users in the Upper Gunnison River Basin and he interpreted this language to include any junior diverter (including Arapahoe) regardless of where the diverter intended to ultimately put the water to beneficial use. [Danielson, 10/20/97 Transcript, pp. 92-94, 105 {also see p. 124 with respect to treating citizens of Arapahoe as "residents" of the Gunnison Basin in a "hydrologic sense."}]

2) The position just stated is contrary, however, to Dr. Danielson's own letter to the Division Engineer for Division 4 dated August 2, 1984, in which he referenced the subordination in terms of "uses in the Upper Gunnison Basin." [Exhibit 4123] [Danielson, 10/20/97 Transcript, p. 95-96] Further, he acknowledged that the BUREC probably did not use the words "junior users

in the basin" to include Union Park, as he would interpret said words. [Danielson, 10/20/97 Transcript, p. 94]

3) Elsewhere in his testimony, Dr. Danielson acknowledged that the BUREC did have the intent to limit the subordination's availability to junior "in-basin" diverters, and not to permit it to be used for exportation out of the basin by trans-mountain diverters. [Danielson, 10/20/97 Transcript, pp. 95, 97, 105, 122-123]

4) On balance the Court finds that Dr. Danielson attempted to substitute his own construction of how a "subordination" should work for the BUREC's clear intent to limit its policy to in-basin development only. [Danielson, 10/20/97 Transcript, pp. 73, 88] Thus, the Court rejects Dr. Danielson's interpretation of the policy to the extent that he believes it was for trans-basin use.

¶125 b. While **Mr. Cook** expressed his personal belief that the BUREC's subordination should not be interpreted to preclude trans-basin diversions, he acknowledged that correspondence by more senior BUREC policy-making officials could be interpreted to limit the subordination to "in-basin" use and development, thus excluding trans-basin diversion. [Cook, 2/21/90 Deposition, pp. 126, 129-131, 133] Also he recognized that it was up to the State Engineer (rather than the BUREC) to administer the subordination, and in Mr. Cook's opinion the "in-basin limitation" made it a selective subordination which could not be enforced by the State Engineer. [Cook, 2/21/90 Deposition, pp. 134, 141, 150] In addition, he expressed the view that the "in-basin" limitation violated the spirit of CRSPA (PL 485) and was not in the best interests of Colorado generally. For reasons which will be explained below, the Court rejects this testimony to the extent it mischaracterizes the BUREC's actual intent to limit the subordination to "in-basin" use only.

c. **Ms. DeAngelis** extensively reviewed the history and evolution of the BUREC's subordination policy, and emphatically testified that the subordination (or depletion allowance) was limited to the application water to use within the basin of the Upper Gunnison River, and that it was not for trans-basin diversions; [DeAngelis, 10/23/97 Transcript, pp. 121, 125, 157; and DeAngelis 10/24/97 Transcript, p. 20] [Also see Exhibit 4087]

1) Ms. DeAngelis contradicted Mr. Cook's testimony on the "in-basin limitation" issue, based upon the fact that he did not make policy and that his testimony was contrary to the extensive documentary evidence of the BUREC which supports the intent to limit the subordination to "in-basin" development only. [DeAngelis, 10/24/97 Transcript, p. 132-133, 139]

2) Further, she relied on the Regional Director's 3/15/90 letter[22] to Senator Wirth which limited the availability of the

[22] In his August 12, 1997, Deposition, Mr. Cook acknowledged on pages 22-23 that his own staff was involved in preparing the response to Congressman [sic. Senator] Wirth. Mr. Cook

depletion allowance to "in-basin" development and observed that a trans-basin diverter of water could benefit from water from the Aspinall Unit only by purchasing the same. [Exhibit 4140] She noted that the Regional Director is in a policy making position, and that his letter was written only three weeks after Mr. Cook's February 21, 1990, deposition, so that the letter, rather than Mr. Cook's testimony, was most likely to accurately state the BUREC's subordination policy. [DeAngelis, 10/23/97 Transcript, pp. 132-133, 139-140]

¶125 d. **Mr. Lochhead**, appearing as the Executive Director of the Colorado Department of Natural Resources, testified to the State of Colorado's position regarding the subordination. He comprehensively reviewed the history of the BUREC's policy and testified that it clearly intended to limit diversions and use of the water for development and consumptive use within the natural basin of the Gunnison River. [Lochhead, 10/24/97 Transcript, pp. 74, 82] In support of this conclusion, Mr. Lochhead testified as follows:

1) "The State's policy is that there is a subordination of the water rights at the Aspinall Unit as a whole for at least 60,000 acre-feet for the development and consumptive use within the natural basin of the Gunnison River." (Emphasis Supplied) [Lochhead, 10/24/97 Transcript, p. 74, 76] The Court is particularly persuaded by this testimony, and finds that it accurately summarizes the BUREC's policy, and the State's approval of the same. This position is clearly supported by the minutes of a meeting of the **Colorado Water Conservation Board** (CWCB) held in November 1983, when it **unanimously approved** a motion recommending that the CWCB's director, the state engineer (Dr. Danielson), the Gunnison District and the River District continue negotiations with the BUREC "to consummate an agreement providing for the subordination of Aspinall Unit water rights aggregating 60,000 acre-feet of water for consumption in the Gunnison River Basin, with an unspecified quantity reserved for the Fruitland Mesa Project." (Emphasis supplied) [Exhibit 4113, pp. 14-15] Further, Mr. Lochhead observed that Eastern Slope is represented on the CWCB, and when considering the 60,000 acre-foot subordination, it was aware of the concerns of the Gunnison Basin and the configuration that the Curecanti Unit ultimately took. [Id. 122-123]

2) The subordination policy per se was intended to benefit only junior appropriators who put the water to beneficial use within the Basin without charge, and that the BUREC has a separate "marketable pool" of water[23] which may be purchased by in-basin **or** trans-basin diverters; and that the State is supportive of this policy. [Lochhead, 10/24/97 Transcript, p. 74-77] Thus,

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stated that he did not recall participating in the drafting of the letter but he likely did.

[23] This reference to a "marketable pool" refers to 240,000 acre-feet of water available for sale through the Aspinall Unit. [See ¶14.c.5 on p. 9 of this Order]

Mr. Lochhead stated that Arapahoe's alternatives for exporting water out of the Gunnison River Basin are either to appropriate unappropriated water, if any, (without the benefit of the depletion allowance) or to purchase water from the Aspinall Unit from the sale pool. [Id. 135-7]

3) Mr. Lochhead testified that an accommodation was reached among state, local and federal (BUREC) interests which contemplated establishing the 60,000 acre-foot subordination for in-basin use and a separate "marketable pool" from the Aspinall Unit for any junior user (whether in-basin or trans-basin). [Lochhead, 10/24/97 Transcript, p. 75] He likened that accommodation to the balancing of interests between the East and West Slopes which the legislature had attempted to do in several statutes, including those creating the CWCB, the River District, water conservancy districts [such as the Gunnison District] including the power in CRS §37-45-118 (to develop sources of water for use within the district), in an effort to balance interests between the East and West Slopes. [Id. 78-79] The Court accepts this testimony, and the inference that the arrangement is analogous to the concept of "compensatory storage" reservoirs which have been successfully developed with respect to other trans-basin project. [See: **§B.3, pp. 37-39 of this Order**]

4) Mr. Lochhead also disputed Dr. Danielson's conclusion that Arapahoe would be "within the basin" so as to be able to benefit from the subordination. [Lochhead, 10/24/97 Transcript, p. 150] The Court accepts Mr. Lochhead's testimony on this point.

5) Mr. Lochhead further testified that his expression of the State's position with respect to the BUREC's subordination policy was the same in 1990, and that the positions he stated reflect the State's policy from the time of the economic justification report (circa. 1962) and the authorization of the Aspinall Unit through the present time. [Lochhead, 10/24/97 Transcript, p. 149] The Court adopts this testimony as correct, especially to the extent it contradicts the testimony of other witnesses.

f. **Mr. Simpson** as the present State Engineer acknowledged that the BUREC's subordination contemplates use by "in-basin upstream junior appropriators" diverting water within the Upper Gunnison River system, and that it is not allowed for trans-basin diversion. [Simpson, 10/24/97, p. 165, 178-179] He also testified extensively about whether this aspect of the policy constituted a selective subordination, and whether it could be implemented without violating any prohibition against selective subordinations. This issue is more fully addressed below.

A.3 Contracts are Required

126. **The Court finds that a contract is necessary to implement a junior appropriators's right to rely on the BUREC's depletion allowance to support his application for a decree to divert water in the Gunnison River Basin above the Blue Mesa Dam, except to the extent that the BUREC's waiver of this requirement enabled small-well users to actually**

**receive permits and decrees based upon their applications for junior water rights to be used within the basin.** To support these conclusions on the need for a "contract," the Court finds as follows:

a. **Dr. Danielson** testified that to his knowledge no contract were required in order to benefit from the subordination; and that he never required a contract for this purpose, nor did he believe that a contract is necessary; although he did express concern for numerous groundwater users who, with nothing more than verbal assurance, faced the prospect of being shut down if the BUREC revoked its subordination. [Danielson, 10/20/97 Transcript, p. 78, 108-109, 143] He also stated that even if a contract were used, enforcement of the subordination would still require a decree from the water court recognizing the junior diverter's right to rely on the subordination. [Id 120-1]

b. From her very first articulation of the depletion allowance policy, **Ms. DeAngelis** consistently testified that a contract is necessary to implement one's right to rely on the allowance. [DeAngelis, 10/23/97 Transcript, p. 69, 138-139, 157, 198; (also Exhibit 4144); and [DeAngelis, 10/24/97 Transcript, p. 31]

1) In fact shortly after the issuance of the **Commissioner's Speedletter of 6/23/63** [Exhibit 4078] which formally recognized the subordination policy, the BUREC approved three contracts for reservoirs {with Brush Creek, Needle Creek and Irby/Means} in July 1994 [Exhibits 4086, 4087, and 4090] and a fourth contract was approved by the BUREC in December 1965. [Exhibit 4099] [DeAngelis, 10/23/97 Transcript, pp. 87, 107-114, 130, 184-187; [DeAngelis, 10/24/97 Transcript, p. 16, 28, and 38-39]; see also Exhibit 4146] These few contracts at least demonstrate the BUREC's initial efforts toward implementing the subordination policy, and also demonstrate the willingness of the BUREC to make the policy available to individual water users in the absence of the development of the five participating projects for which it was initially envisioned.

2) The Court finds that in the 1980's a number of applications for well permits were filed, and over time many have been granted without objection or call by the BUREC, even though no contract protected them against a call. Ms. DeAngelis explained that the BUREC did not require contracts for these groundwater rights because it was trying to accommodate the State Engineer. [DeAngelis, 10/23/97 Transcript, p. 132, 189] She added later in her testimony that the BUREC did not believe contracts were necessary because these well permits pertained to very small amounts of water. Id 188-189]

c. When asked to address the BUREC's requisite for a contract to implement the subordination, **Mr. Lochhead** testified that the state is working closely with the BUREC to establish the administrative mechanism to operate the subordination, and that it is expected that this mechanism will accommodate the federal contracting procedures. He indicated that contracting procedures are also established with respect to other projects in Colorado, including the Green Mountain Reservoir and the Ruedi Reservoir, and that while certain differences

pertain, the overall concepts are very similar. [Lochhead, 10/24/97 Transcript, pp. 82-85] Mr. Lochhead acknowledged that a potential junior water user seeking to divert water above the Aspinall Unit may acquire the right to do so either by contracting for water from the BUREC or by appropriating water pursuant to Colorado law. [Id. 135-7]

d. **Mr. Simpson's** testimony regarding the requisite for a contract seemed to presume that a contract is needed and focused on the provisions of such a contract and the need to supplement the same with a court decree approving a plan of augmentation. He did note that the proper implementation of any contract for use of water under the subordination would be subject to certain operating criteria, which have yet to be developed. [Simpson, 10/24/97, pp. 167-169]

1) **An issue was raised during the 1997 trial as to whether or not the conditions of existing contracts have been satisfied. Mr. Simpson** testified that he does not believe all of the conditions listed in the contracts [identified in **¶103.d above**] have been satisfied. In support of this conclusion he noted that the provisions of ¶10 of the contracts require the contractor (ie. the junior water user) to comply with "operating criteria" developed by the United States, the River District, the Gunnison District and the CWCB; but said operating criteria are not yet developed.

2) Mr. Simpson stated that the reference in the contract to compliance with state law contemplates that the contractor/water user needs to obtain a plan of augmentation (including exchanges) so the contract can be administered. Thus, Mr. Simpson concluded that discussions among the United States, the River District, the Gunnison District and the CWCB need to be completed before the required criteria are adopted. [Simpson, 10/24/97, p. 168-9]

e. As an additional reason for its belief that a contract is necessary to implement the subordination policy is the Court's own ruling early in this litigation, in September 1990, prior to the first trial, that a contract was necessary. At that time this Court stated:

"It is clear from an analysis of the Colorado River Storage Project Act and related reclamation laws that the Bureau of Reclamation may dispose of water only through a written contract. The Bureau of Reclamation has no discretion or authority to dispose of water in any other manner. The Court is satisfied that the Bureau cannot subordinate its water rights by a simple oral declaration of its officials, and that a more formal, written contract will be necessary to express said decision." Order of September 14, 1990, in this action. [see also 10/23/97 DeAngelis Transcript, p. 198] [also see Exhibit 4158]

### A.4 Reconcile Conflicting Testimony between Mr. Cook & Ms. DeAngelis

127. The Court recognizes that it has heard conflicting testimony given by two knowledgeable BUREC officials: Wayne E. Cook through his 1990 and 1997 depositions, and Carol DeAngelis, through her testimony during the October 1997 trial. Having weighed the credibility and

consistency of this respective testimony, the Court finds and concludes that the evidence presented by Ms. DeAngelis is more credible and reliable for the following reasons:

a. The Court accepts most of Ms. DeAngelis' testimony because it is strongly supported by the history and evolution of the subordination policy over the forty years of its development. The Court has read carefully virtually all of the exhibits bearing on the subordination issue, including the legislative history, BUREC correspondence and approved forms of contract, and minutes of meetings attended by BUREC representatives. This review clearly demonstrates the BUREC's consistent adherence to a subordination concept which contemplated a maximum 60,000 acre-feet depletion allowance for use solely within the Upper Gunnison River Basin and the same had to be implemented by execution of a contract between the BUREC and the junior appropriator. Ms. DeAngelis' testimony interpreting said history reaches conclusions supportive of said summary.

b. The portions of Ms. DeAngelis' testimony which the Court does not accept are 1) her conclusion that one-half of the 40,000 acre-feet above Blue Mesa Reservoir available under the subordination policy has already been allocated, and 2) the Court needs to address issues raised by her position that the subordination policy has not yet been effectuated.

c. Wayne Cook's testimony is found principally in Exhibit 3141, which contains pp. 7, 134-143, and 157-162 of his 2/21/90 deposition testimony and in a 69 page deposition taken 8/12/97. The reasons the Court does not give as much credence to Mr. Wayne Cook's testimony because of his conclusions that the subordination can be used by trans-basin diverters is simply not supported by a fair reading of the BUREC documents which address this subject.

**B. The Issues Pertaining to "Selective Subordination"**

128. Based upon the foregoing findings and conclusions regarding the BUREC's subordination policy, the Court has found that the BUREC's intent is to limit the subordination to in-basin use and development only. The BUREC recognizes that the ultimate administration of the policy is up to the State Engineer, but the BUREC also has made it clear that if the State Engineer cannot effectuate the BUREC's intent, then it will revoke or withdraw the policy.

129. In light of the situation just described, the Court further finds and concludes as follows:

a. A threshold question is whether the BUREC's policy limiting the subordination to in-basin development only is prohibited as an impermissible selective subordination, or whether it is enforceable as an agreement between a senior user and junior users, or can be rendered enforceable through additional efforts, including compliance with the recommendations by some of the witnesses to obtain a decree which includes a plan of augmentation or approval of an exchange or other appropriate mechanism.

b. To put this issue in context, the Court recognizes that the administration of water rights under Colorado's priority system rests on the bedrock principle that "first in time is first in right" so that at a time when there is insufficient water to satisfy all of the rights decreed from a certain source of water, the senior decree holder has the right to place a "call" for delivery of all of his water as against a junior decree holder, and the State Engineer must honor the call in his duty to administer water rights.

¶129 c. As noted earlier, the term "**subordination**" itself refers to "the willingness of the owner of a senior water right to not place a call on the system on the river in deference to junior water rights." [Danielson, 10/20/97 Transcript, p. 66] And a "**selective subordination**" exists "where the owner of the senior water right would designate certain junior water rights to which he would subordinate but would not subordinate to other junior water rights." All parties in this case acknowledge that the State Engineer will not administer a selective call per se (unless it is decreed).

d. Thus, the question remains as to whether or not the BUREC's subordination policy is an impermissible selective subordination because it seeks to subordinate its senior rights only for the benefit of users of junior water rights who divert water solely for in-basin development, but it withholds said benefit from those junior water users who seek to export water through transmountain diversions. If posed as a broad hypothetical question, without the context in which it actually arises, the answer to this question should be "Yes" the policy constitutes a selective subordination. However, based the evidence presented in this case, the history of the policy's development, and the manner in which the policy is expected to be implemented, the Court finds and concludes for the reasons stated in the following paragraphs that the BUREC's policy is not a selective subordination under the facts of this case.

130. From earlier findings in this Order, the Court concludes that at the time the River District assigned the state adjudicated water rights for the Curecanti Unit to the BUREC and the state rights for the Upper Gunnison Basin Project to the Gunnison District in 1962, there was an understanding in principle among the BUREC and the Districts that the BUREC would provide a depletion allowance of 60,000 acre-feet for use within the Gunnison River Basin. There is no document executed by both parties to support a finding that a formal written contract existed between the parties, but there is extensive evidence that the parties had the same intent (a meeting of the minds) that the BUREC would provide a subordination (or depletion allowance) of its senior water rights in an amount of 60,000 acre-feet for the benefit of in-basin development and use of water by junior appropriators upstream from the Curecanti Unit. This intention is expressed and confirmed in several ways:

a. The intention of the River District and the Gunnison District on behalf of in-basin junior water users is demonstrated by the state decrees themselves; the condition in the River District's assignment to the BUREC to the effect that the BUREC should utilize the water rights "in a manner consistent with the development of water resources for beneficial use in the natural basin of the

Gunnison River," [Exhibit 4049, p.2]; and this Court's findings in the section on "Formalization of the BUREC's Subordination Policy." [¶¶94-122, page 52-68 of this Order] That section is replete with the recognition of the River District and the Gunnison District that the proposal to construct the Curecanti Unit would have enormous impact upon the Gunnison River Basin. The River District initially, and the Gunnison District after it was formed in 1959, sought promises and concessions from the BUREC to minimize said impact, including a mechanism to replace trout habitats which would be inundated and redemial measures to assure that the Curecanti Unit would not foreclose the future development of the Upper Gunnison River Basin.

b. The respective promises of the parties, the efforts by the River District to obtain the state decrees, the Gunnison District's acceptance of the assignment of the water rights for the Upper Gunnison Basin Project and its agreement to work with the BUREC to implement those projects, and the BUREC's reciprocal agreements to develop the Curecanti Unit in ways which would promote the development of the Upper Gunnison Basin (including especially the promise to implement the subordination policy which is the subject of this litigation), all provide consideration to support the parties' understanding as a binding enforceable agreement.

c. The binding effect of the promise to subordinate for in-basin use was acknowledged by the BUREC's legal counsel and other BUREC officials. [Exhibits 4060, 4075, 4078, 4124-5, 4131, 4140, and 4144].

d. Based upon the 1959 Economic Report [Exhibits 179, 3094], which was available to the court when it decreed the water rights claimed by the River District in Case 6981, the subordination came to be quantified at 60,000 acre-feet as a depletion allowance for the benefit of upstream junior appropriators for in-basin development. [See **¶85.d of this Order**]

e. The remaining element for the subordination agreement to be enforceable was the requirement by the Commissioner for the BUREC that contracts be utilized to memorialize and formalize the granting of the depletion allowance, in part to have a mechanism to account for the depletions granted.

f. The Court's finding of an agreement in principle is supported by Mr. Lochhead who testified that "arrangements were struck" by the interested parties to establish the 60,000 acre-foot subordination. [Lochhead, 10/24/97 Transcript, pp. 74, 121-122]

131. The Court concludes that the conduct and understandings of the parties resulted in an executory contract, implied if not expressed, that the BUREC would authorize a depletion allowance in the amount of 60,000 acre-feet but restricted to in-basin use and development and to be granted under the terms of a written contract. The Court finds that said terms are the essential provisions required to create an enforceable obligation requiring the BUREC to honor said terms. In reaching this conclusion the Court is applying that principle of law which admonishes courts to give effect to the intentions of the parties. USI Properties East, Inc. v. Simpson, 938 P.2d 168 (Colo. 1997).

132. Of course the conclusion just announced is not applicable if the contract is void as against public policy; and if it is void, then there is no subordination at all. However, the Court concludes that the subordination agreement is not void as against public policy for the following reasons:

a. A party may stipulate away valuable property rights without violating public policy. USI Properties, supra. 938 P.2d 173. See Perdue v. Ft Lyons, 184 Colo. 219, 519 P.2d 954 (1974), in which the Colorado Supreme Court held: "By contract a person can make his priority inferior to another" and "It is judicial economy for the water judge to find the effect of the contract and recite it in the priority decree." [184 Colo. 223]

b. The Court finds that the BUREC has not violated any public policy by virtue of its intent to subordinate only to in-basin use of the depletion allowance. There are legitimate reasons for devising a procedure by which the needs of the local basin in which the water originates are protected for its own development. This principle is recognized by statute [CRS §§37-45-118 and 37-46-101] and by the concept of compensatory storage. [See: **§B.3 pp. 37-39**] The procedure which the BUREC has established to make the subordination viable is its dedication of the 60,000 acre-feet of water for in-basin use, and its dedication of an additional 240,000 acre-feet of a marketable pool of water in Blue Mesa Reservoir which is for sale to any water user, whether for in-basin use or for trans-mountain diversion and exportation. Such an arrangement achieves an equitable balance between east slope and west slope interests as **advocated by Senator Johnson** and **emphasized by Mr. Lochhead**, the Executive Director of the Department of Natural Resources. Importantly this policy was unanimously supported by the Colorado Water Conservation Board, which is responsible for overseeing the unified and harmonious development of the State's water resources for the benefit of the State of Colorado as part of its statutory mandate. [C.R.S. §37-60-115(1)(a)] [Exhibit 4113, pp. 14-15] [See **¶¶54, 114 and 125.d.1 of this Order**]

c. As just mentioned, the policy is consistent with the initial legislation in the 1930's and 1940's which recognized the importance of striking a balance between the development of water in the basin in which it arose and permitting state-wide interests to appropriate and export water out of the basin. [CRS §§37-45-118, 37-46-101 and 37-60-115] Clearly an intent of the legislature in 1937-43 was to protect local basin interests so far as reasonably foreseeable use of the water exists. The foreseeability of the development of water resources originally focused on the Upper Gunnison Basin Project; but as times, economic conditions, and needs have changed so has the focus of the subordination policy. The policy for maximizing the beneficial use of water throughout the state requires some flexibility, so that projects for which high hopes were once held, can be changed and refocused if they subsequently become infeasible.

d. Based upon the testimony of Ms. DeAngelis and Mr. Lochhead, the Court finds that the subordination policy and its concomitant policy regarding the marketable pool establish a rationale balancing of the competing interests of trans-mountain diverters and in-basin

developers with a result that promotes the maximum use of water for the benefit of all citizens in the state of Colorado, and thus assures that Colorado can fully exercise its Compact rights.

e. The policy is analogous to the concept of compensatory storage to protect the interests of western slope users with replacement storage reservoirs -- an important objective of the early '30's-'40's legislation -- as demonstrated through various projects: The Colorado-Big Thompson Project (which utilized the Green Mountain Reservoir); Denver's Blue River Project through the Roberts Tunnel (which utilized the Dillon Reservoir), the Frying Pan-Arkansas Project (which utilized the Ruedi Reservoir). [See **¶¶64-68 above**]

¶132 f. It is quite significant that while many studies were made in the 1940's and 1950's which considered the trans-mountain diversion of water from the Gunnison Basin, none of those were acted upon.

1) In fact when the authorization of the Curecanti Unit presented the ideal opportunity to expressly designate a portion of the water for trans-basin diversion, CRSPA (unlike similar legislation for trans-mountain diversion projects which have been authorized) was completely silent about such a purpose.

2) Also the very studies which contemplated trans-basin diversion objectives, routinely contained protections for the natural basin to retain sufficient water for its own development. [**¶¶57-63 above**] It is reasonable to view the BUREC's policy limiting its subordination to in-basin use as accomplishing that very purpose for the Gunnison Basin, recognizing that the BUREC has a market-able pool of some 240,000 acre-feet of water available for sale which is not limited to in-basin use, but is also available to trans-basin diverters.

g. Further, in view of the fact that the Aspinall Unit has the effect of causing the Upper Gunnison Basin to be over-appropriated, it must be recognized that the total removal from the basin of the depletion authorized by the BUREC to avoid the consequences of over-appropriation, would forever thwart junior appropriators from development within the basin, unless they were required to purchase water from the marketable pool. However, this alternative is inherently unfair to the local tax-paying inhabitants of the basin[24]; it flies in the face of the State's policy to balance the interests of the respective slopes; and it militates against the policy of the state statutes which were cited earlier.

h. It is principally for the foregoing reasons, that the Court concludes that the BUREC's subordination of 60,000 acre-feet for in-basin use and development only is not a selective subordination; it is consistent with and actually promotes the objectives of the River Compacts for full development of Colorado's apportionment of the

[24] See **¶52.c in this Order**; also City of Thornton v. Bijou Irrigation Co. 926 P.2d 1, 55 & 59 (Colo. 1996)

water resources available to the Upper Basin States, and it can be legally implemented.

C. Implementation of the Subordination Policy

133. Since its inception, the history of the depletion allowance demonstrates various efforts to implement it. These include the early contracts in 1964-65 and the BUREC's attempt to accommodate the desires of the State Engineer in the 1980's by indicating its willingness not to call out junior users who were applying for small wells to divert groundwater. Arapahoe has argued that as a trans-basin diverter, it should be entitled to benefit from the subordination because the State Engineer Dr. Danielson declared the BUREC's senior rights to be junior to all other users upstream of the Aspinall Unit and because the BUREC did not require contracts for said small well appropriators. However, the Court rejects Arapahoe's position in this regard because:

a. The Court finds that the BUREC did not waive forever, and as to all potential users, its right to impose the conditions it deems important to its subordination policy simply by not requiring the small well owners to enter into a contract to benefit from the depletion allowance. Rather, the BUREC voluntarily agreed to suspend the contract requirement in order to accommodate both the State Engineer and the small water users involved, and to avoid the effort of dealing with numerous situations which from the BUREC's perspective would not adversely impact its interests. Whether these individual rights are at risk because the BUREC did not utilize a contract for what may be considered a transfer of federal water, or whether the small well owners are protected on the bases of their decreed rights and perhaps an estoppel argument, are not within the jurisdiction of this Court to determine in this case. Suffice it to say that the Court concludes that the BUREC's subordination policy agreed to with the Districts remains in tact in spite of the fact that it allowed small-well owners to obtain junior rights without first obtaining a contract from the BUREC.

b. As a footnote, the Court recognizes that the validity of the water rights of small well owners might be material to the issue of water availability if Arapahoe qualified for the subordination, because the amount of the depletion allowance available for Arapahoe would be impacted (although not seriously affected) by the quantity of water allocated to the small well owners. However, since the Court has concluded that the subordination is limited to "in-basin" use, the Court will not pursue this issue further with respect to the small well owners.

c. There was some testimony regarding the right of the BUREC to revoke the subordination, and the Court finds that in the absence of an obligation to honor its understanding with the River District, the BUREC, as the owner of its senior rights, would have the absolute right to determine whether or not to subordinate, and to revoke a voluntary subordination. However, here the BUREC has recognized its obligation to grant a depletion allowance for in-basin use in an amount of 60,000 acre-feet. [Regional Solicitor's Letter of 10/26/84, Exhibit 4131] Thus, the Court concludes that the BUREC has no right

to revoke the subordination unless it cannot be legally administered by the State Engineer, in which case the subordination must fail altogether. To hold otherwise would require the BUREC to submit to terms of subordination contrary to its expressed intent, and since the owner of a senior right cannot be forced to subordinate upon terms which it finds unacceptable, neither the State Engineer nor any other party could require the BUREC to subordinate to trans-basin diverters against its will.

¶133. d. There is also a question as to whether the subordination has been effectuated at all. Ms. DeAngelis testified that because the BUREC has not made a call as a pre-condition to the subordination's taking effect, the policy has not been implemented. [DeAngelis,10/23/97 Transcript, pp. 161-162, [DeAngelis, 10/24/97 Transcript, p. 41]

1) On this point, the Court recognizes that some efforts have been made to effectuate the subordination, including the four contracts executed in 1964 and 1965, and also the "de facto" subordination of the BUREC's senior rights to the well-owners in the 1980's.

2) Also it may be argued that the absolute decree awarded by this Court in case 86-CW-203 benefitted from the subordination simply because the BUREC did not oppose or protest said water right. That decree was for 19,200 acre-feet of water for irrigation purposes, as part of the refill right which the Court recognized for the BUREC's Taylor Park Reservoir. Actually the Court was implementing the 1975 Exchange Agreement made among the United States, the UVWUA and the Gunnison District. To the extent this results in a depletion of water for upstream development, it probably represents a charge against the BUREC's depletion allowance, even though the right is owned by the BUREC itself.

3) However, aside from these identified rights or categories of rights, the Court finds and concludes that the subordination policy has not yet been fully effectuated. Given the testimony of most of the witnesses, the Court concludes that while the policy has been adopted by the BUREC, and it is not an impermissible selective subordination, nevertheless issues remain to be resolved before it can be properly implemented: including the development of requisites which can assure that it will support decrees to be issued to junior in-basin developers (such as the need for a plan of augmentation and perhaps exchange provisions) and the adoption of the "operating criteria" to which Mr. Simpson testified (including an accounting of the depletion allocated per calendar year and reporting requirements). [Simpson, 10/24/97, pp. 169, 180, 187] [Danielson, 10/20/97 Transcript, pp. 71, 88, 108, 113-114, 118, 120-121]

e. There is also the issue of what policy was in effect at the time of Arapahoe's applications (in 1988 and 1990). In this regard, the Court finds that at that time, the essentials of the policy (including its quantity, the in-basin use feature, and the contract requirement) had been established, but the "operating criteria" for it to be effectuated remained to be developed.

### D. Arapahoe Cannot Rely on the BUREC's Subordination Policy

134. On balance the Court finds and concludes for several reasons that Arapahoe cannot rely on the BUREC's subordination to establish that water is available for its Union Park Project. A summary of the reasons for these findings and conclusions are as follows:

a. Arapahoe does not intend to use the water in-basin and thus is not an intended recipient of the subordination.

b. Without the policy's operating criteria being finalized, the policy was not ready for enforcement in 1988-90 when the applications were made. Arguably, had Arapahoe otherwise been eligible to benefit from the policy, then it could have entered into negotiations at that time and perhaps arrived at a satisfactory understanding as to the appropriate operating criteria to be applied. But the fact is that it did not take this step, and its failure to have a viable contract to utilize the policy in place at the time it filed its applications defeats its ability to rely on the policy (had it been available to Arapahoe) for the purposes of demonstrating water availability for the purposes of this case. Arapahoe County, 891 P.2d 952, 957.

c. If the policy cannot be limited to in-basin users, then the BUREC will revoke it, and therefore Arapahoe cannot benefit from the subordination policy.

d. Arapahoe is incorrect in assuming that the subordination has no quantity limitation, because in fact, the subordination is limited to 40,000 acre-feet above the Blue Mesa Reservoir (which is where the Union Park Project would be located). Thus, even if the subordination policy were available to Arapahoe, it would have had the burden of showing that a sufficient quantity of the 40,000 acre-feet of the depletion allowance above Blue Mesa was available to its Union Park Project, and it did not meet its burden in this regard.

## VIII. OTHER MODELLING ISSUES

### A. East River Diversions

135. The primary issue with respect to the modelling of the East River as a source of water available to Union Park Reservoir is whether or not water is available after July 1 each year.

136. In its Decree following the 1991 trial, this Court accepted the testimony of two ranchers, Messrs. Spann and Trampe ("Spann and Trampe") to dismiss five of Arapahoe's points of diversion in the East River basin. This ruling was based upon the testimony of the ranchers that their cooperative irrigation efforts took command of the entire stream system on or before July 1 in each year and no water was available after that date. The testimony of Spann and Trampe from the 1991 case was introduced as evidence in the 1997 case. Spann and Trampe were not called to supplement their prior testimony, although their counsel participated in the 1997 trial.

137. The guidelines for modelling water availability for the 1997 trial were significantly different from the 1991 trial, and included the provision that absolute water rights should be modelled limited by their decrees, and diversions in excess of the decreed amounts should not be considered in determining water availability. In response to this Order, additional data was developed by Arapahoe and by CCH which demonstrated that in some years water was available after July 1 if the diversion records were reduced to the decreed quantities. The Districts' expert, Mr. Helton, did not specifically model irrigation water rights on the East River, but he did include a "switch" in his summary model to demonstrate the difference in his analysis depending upon whether diversions on the East River would be allowed or not.

138. Contrary to its findings in the 1991 trial, the Court now finds based upon the state's diversion records that in years with more than average precipitation, a limited amount of water is available beyond the decreed rights of Spann and Trampe; and the internal system of water management between Spann and Trampe for the purpose of sharing water is not to be considered for the purposes of determining whether or not water is available for Arapahoe's Union Park Project.

139. Even with this finding however, the Court concludes that the constraint of the Aspinall Unit, and Arapahoe's inability to utilize the BUREC's subordination policy, render Mr. Leak's modelling results unreliable. The Court concludes that the analysis of the Opposers' experts should be accepted, including Mr. Helton's model as "switched" to the mode which demonstrates water available on the East River after July 1.

## B. Consolidated East River Diversion Structure

140. On May 31, 1995, Arapahoe moved to amend its Application to move its claimed points of diversion on the East River and Copper Creek to a consolidated point below the confluence of the two streams. The new point was known as the "Consolidated East River Diversion Structure." That amendment was based upon a stipulation entered into between Arapahoe and the Rocky Mountain Biological Laboratory ("Rocky Mountain") on April 30, 1991, for the purpose of avoiding impacts to Rocky Mountain, its water rights and ongoing studies at its laboratory.

141. Recognizing that the stipulation represented a reasonable accommodation between the parties designed to avoid harm to Rocky Mountain as a result of diversions of water by Arapahoe at the original points of diversion and that the amendment would not prejudice the parties herein because of adequate time to address the issue, the Court granted the motion to amend and directed that the amendment be published in the resume. The Court also permitted the amendment to relate back to the time of Arapahoe's November 30, 1990 amended application.

142. The parties now disagree as to whether or not Arapahoe may rely on the potential for the diversion of more water at the consolidated point of diversion than it could have diverted at the separate original points of diversion. To address this dispute, the Court finds:

a. It appears that the practical basis for the parties' dispute is the fact that more water can be diverted from the consolidated

point of diversion, so Arapahoe argues that it should be entitled to rely on the increase, and the Opposers assert that Arapahoe should be limited to the amount of water they originally expected to produce from the two separate points of diversion. [In this regard, the Court notes that Arapahoe used the same total rate of flow at the consolidated point which it claimed at the two separate points, but it appears that the flow will run for a longer period at the consolidated point, so a greater volume is produced.]

b. The legal basis for the Opposers' objection is that if Arapahoe prevails on this point then Court will be allowing Arapahoe to improperly expand its appropriative intent, that is to claim more water at an earlier priority date than it originally intended as of November 30, 1990, when its first amended application was filed.

143. For the following reasons, the Court concludes as a matter of law that the Opposers' position is correct:

a. With regard to the "relation back" principle, the Court recognizes that the "timing" of one's intent to appropriate water is very important in establishing a proper priority date. Thus granting a 1995 motion to amend which seeks a greater amount of water, and allowing it to relate back to a date before the intent was demonstrated is improper. The Court recognizes that the stipulation on which the motion is based was executed on April 30, 1991, so it is reasonable to assume that Arapahoe's intent to divert the greater volume was established as of that date; and of course, Arapahoe did attempt to amend its application in 1991 but that was denied because it was made too close to the 1991 trial date.

b. The issue remains whether or not Arapahoe's attempt to divert a greater amount of water based upon an intent established five months after the November 30, 1991, date is material. Five months seems to be a relatively short period, and thus immaterial. However, under Colorado's system of establishing priorities by calendar year, the five-month delay is material because it places Arapahoe's intent with respect to the consolidated point of diversion in 1991, a new calendar year. [CRS §37-92-306] The Court concludes that this fact is fatal to Arapahoe's contention that it may claim a greater volume of water at the consolidated point of diversion than the total of the volume it could expect to be produced at the two original points of diversion. Arapahoe has not satisfied the terms of CRS §37-92-306.1

c. Had the Court not ordered the amendment to relate back to the November 30, 1990, filing, then Arapahoe would be entitled to claim the greater amount produced at the consolidated point of diversion, but with a later priority date.

d. Thus, the Court concludes that in ascertaining the water legally available of Arapahoe's Union Park Project at the Consolidated East River Point of Diversion, Arapahoe is limited to the amounts physically produced at the two original points of diversion, on the East River and on Copper Creek, respectively.

144. Given the foregoing analysis and conclusions, the Court turns to its analysis of the modelling by the three experts:

a. Mr. Leak's modelling demonstrated an excess of 2,000 to 3,000 acre-feet of water at the consolidated point over the volume at the two original points of diversion.

b. As to the Opposers' two experts, Mr. Helton did his analysis at the original points of diversion, and Mr. Book, in an effort to be conservative, modelled the consolidated point of diversion. This may be one explanation for the fact that Mr. Book's calculation of the total water available for the Union Park Project was greater than the amount determined by Mr. Helton.

c. On balance the Court finds Mr. Helton's analysis to be the most accurate and reliable in predicting the amount of water legally available to Arapahoe's project from the Consolidated East River Point of Diversion, and his position is adopted.

## IX. ANSWERS TO THE DISPUTED ISSUES

145. The disputed issues for trial as listed in ¶19 of this Order can now be answered as follows: The "letter" designation used in each of the following paragraphs identifies the question referenced under the same letter in said ¶19:

146. The Question in ¶"a" asked **What volume of water is available for diversion in priority by Union Park?** In response to this, the Court finds that the modelling analysis of Arapahoe's expert, Mr. Leak, demonstrated as an average annual yield, that the water available to Union Park Reservoir would be between 103,000 acre-feet and 113,000 acre-feet. However, while the Court believes the modelling results achieved by Arapahoe's expert, Mr. Leak are based upon reasonable engineering principles, they are not reliable to predict water availability because the legal assumptions which were employed to govern the analysis were not valid. Without detailing each deficiency, the Court specifies the following three:

a. Arapahoe's position assumed that it, as a trans-basin appropriator, could legally rely on the BUREC's subordination policy in an unlimited amount, when in fact the Court has found that to the extent the policy was available at all in 1988-90, the policy was limited to 60,000 acre-feet (and only 40,000 acre-feet above the Blue Mesa Reservoir) and it was intended only for junior appropriators to use for in-basin development.

1) The factor governing water availability for this case was the application of any subordination policy which the BUREC has for the Aspinall Unit; so even if all other legal assumptions made by Arapahoe were correct, the fact that Arapahoe does not qualify for the benefit of the subordination policy and thus is not exempt from an administrative call of the Aspinall Unit's senior rights, essentially defeats its applications in this case without any other considerations.

2) To supplement the foregoing conclusion, the Court notes that in the context of a project of the magnitude of the Union Park Project, the Upper Gunnison River Basin is virtually over-appropriated because of the senior rights of the Aspinall Unit [even without considering its hydropower rights[25]], and thus the Court is satisfied that there is extremely limited, if any, water available for the Union Park Project.

b. Arapahoe's analysis of the first and second fill rights of the Taylor Park Reservoir was based upon improper legal interpretations of the decrees for said rights, and of the Supreme Court's rulings in the appeal of case 86CW203.

c. Arapahoe's analysis overstated the amount of water legally available for its diversion at the Consolidated East River Point of Diversion.

147. The Court finds that the results of the analyses of water availability by the Opposers' experts demonstrated that from 9,000 to 12,000 acre-feet of water (per Mr. Helton) and about 17,700 acre-feet of water (per Mr. Book) would be available to the Union Park Reservoir after considering the constraints imposed by senior absolute water rights in the Gunnison River. With respect to these results, the Court further finds and concludes:

a. While Mr. Helton and Mr. Book, deviated from some of the Court's guidelines regarding modelling and were not entirely accurate in every legal assumptions they utilized, nevertheless as to the <u>most material constraints</u>, they did make proper assumptions as follows:

1) With regard to the Aspinall Unit and the BUREC's policy of subordination, they were correct in assuming that the subordination policy exempts from an administrative call only 40,000 acre-feet of water above Blue Mesa Reservoir, and that it applies only to <u>in-basin</u> users.

2) With regard to the Taylor Park Reservoir, for the most part the two experts employed valid legal assumptions as to the operation of the reservoir's two storage rights, including the application of the accounting conditions for the Decree in Case 86CW203, and other constraints related to the reservoir.

b. The Court notes that in modelling the Consolidated East River Point of Diversion, Mr. Book's analysis probably overstated the amount of water legally available to Arapahoe at that point by perhaps 2,000 to 3,000 acre-feet. Thus, the Court concludes that his analysis results should be reduced to about 15,700 acre-feet as the average annual yield available to Arapahoe's project.

c. In evaluating Mr. Helton's analysis, and his "three-switch" model, the Court concludes that the most reliable and the most

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[25] See ¶110.c of the above Order for the Court's analysis in this regard.

conservative "switch" to use to resolve the issues in this case would be Scenario 3b [Exhibit 4205, Table 10] which limited the Taylor Park Reservoir second fill its absolute decreed amount of 44,700 acre-feet, it included no call by East River rights, and assumed that the reservoir's second fill would be senior to the Aspinall Unit. Said scenario also accounted for Union Park Reservoir releases for instream flows. This scenario demonstrates an average annual yield of 11,706 acre-feet for the Union Park Project.

148. To arrive at a specific amount of water available for the purposes of this order, the Court is keeping in mind the admonition by the Supreme Court that applications for conditional water rights should be interpreted in light of the State's policy to maximize the beneficial use of all of the waters of the state. With that policy in mind the Court defers to Mr. Book's analysis and adopts the amount of 15,700 acre-feet as an average annual yield in predicting the amount of water available to the Union Park Project.

149. The Question in ¶"b" asked **At what rate of flow will water be available for diversion in priority by Union Park?** In response to this, the Court recognizes that it required the parties analyze the rates of flow achieved at Arapahoe's individual points of diversion during the study period. The Court recognizes that these rates of flow cannot be directly analyzed on a daily basis, as the three models modelled water availability on a monthly time step.

150. The Court finds that Mr. Helton did not do an analysis of available flow rates at the points of diversion for the Union Park Project, but both Mr. Leak for Arapahoe and Mr. Book for CCH did separate analyses for such flow rates. Mr. Book stated on page 3 of his 8/11/97 Report that his analysis in this regard were "not significantly different from those expressed by WRC in their report." [Book's Exhibit 6023]

151. The results of Mr. Leak's analysis of available flow rates at the Union Park Project points of diversion are found in Arapahoe's Exhibit 3115, Figure 1 [Bate #WRC011217] and in Appendix E [start at Bate #WRC 011257]. The testimony and exhibits indicate that diversions at the maximum rate occur at all of Arapahoe's points of diversion, except Texas Creek, in at least 3 full months of 15 peak flow months during the study period, and, typically, in 50% of the 15 peak flow months.

152. The Court finds that there was some difference of opinion between Mr. Leak and Mr. Book with respect to the analysis of available flow rate at Texas Creek. For the purposes of this Order, the Court adopts Arapahoe's position on this issue, and incorporates its statement of that position as follows:

a. The evidence indicated that Texas Creek could only achieve a maximum flow rate of 60 c.f.s. due principally to private in-stream flow rights between the diversion point and Taylor Park Reservoir. The Court has previously ruled that Arapahoe could not assume future condemnation of the private instream flow right in that portion of the river as part of its demonstration of water availability in this trial.

b. Arapahoe presented evidence included in the Rebuttal Report Scenario 2 which demonstrated that the maximum flow at Texas Creek would be achieved in 10 of the 15 years in the study period were it not for the private instream flow constraint [Exhibit R-3115, Appendix F]. The Court does not here reverse its prior ruling on the condemnation issue, but does find that the instream flow constraint prevents the Texas Creek diversion point from diverting at its maximum flow rate.

153. The Court adopts Arapahoe's testimony and Appendix E of Exhibit R-3115 as conclusive on the issue of whether Arapahoe's claimed rates of flow will be available in priority at each claimed point of diversion, based upon the study period and river conditions applicable in this case. Maximum diversions occur with some frequency, with the exception of Texas Creek, which must be limited to a maximum diversion rate of 60 c.f.s. in this Order.

154. The Question in ¶"c" asked **Whether Arapahoe had the right to benefit from the United States' commitment to subordinate Aspinall Unit senior water rights?** The direct response to this is "No" based upon the extensive findings and conclusions of this Order. At to the sub-parts of this question, the Court further answers as follows:

a.The Aspinall Water Rights have not been subordinated to trans-basin diversions.

b. The adjudication of the Aspinall water rights by the River District, and the River District's assignment to the United States, and the United States' commitment to subordinate for the benefit of upstream junior adjudicators for in-basin use **only** is consistent with the purposes of CRSPA under the circumstances of this case and for reasons previously stated in this Order. [See **¶132** inter alia]

c. As a general rule, the subordination of the Aspinall senior rights to upstream junior water rights cannot be implemented without a contract.

155. The Question in **¶"d"** asked **To what extent has the conditional water right for the second fill of Taylor Park Reservoir been exercised prior to the filing of Arapahoe's applications?** The Court's response is that although there is evidence that the second fill right was exercised within the time contemplated by this question, the Court has made its decisions in this case based upon a conservative approach which under Mr. Helton's modelling assumes that none of the second fill was exercised during the critical period. This approach was also taken based upon this Court's understanding that the Supreme Court encourages water courts to resolve doubts on issues of this kind in favor of a result which would maximize the beneficial use of the waters of the state.

156. The Question in ¶"e" asked: **Should the Consolidated East River point of diversion be allowed to divert more than would have been diverted at the two separate original points of diversion?** The Court has answered this question "No" based upon its analysis in **¶¶140-144 of this Order.**

157. The Question in ¶"f" asked: What policies, if any, relating to the operation of federal facilities were in force as of the dates of Arapahoe's applications in 1988 and 1990, and what was the relevance of each such policy? In response to this question, the Court has found that the BUREC had adopted a depletion allowance policy for the Upper Gunnison Basin and it also had certain policies with respect to the operation of the Taylor Park Reservoir storage rights. These policies have been the focus of this lengthy order and little purpose would be achieved in reiterating them now. Rather the reader of this Decree is referred to the table of contents at the beginning of the order for assistance in locating applicable portions of the Decree to better understand the Court's analysis.

## X. RESERVATION OF ISSUES FOR APPEAL

158. All of the parties have reserved issues for appeal in this case. At the October 9, 1997 Case Management Conference, this Court held that all issues reserved for appeal were recognized by this Court with no further action required by the parties. This Ruling was made because the Court did not want to consider numerous motions for reconsideration or other such motions for each issue which had previously been reserved for appeal.

## XI. JUDGMENT AND DECREE

WHEREFORE, IT IS THE ORDER OF THE COURT for the reasons stated in the foregoing Findings and Conclusions in paragraphs 1-132:

A. The Court's prior determinations on both factual and legal issues, other than those which were tried to the Court in the 1997 trial, remain the law of the case, unless expressly modified by this Decree.

B. The Court is persuaded by a preponderance of the evidence that not more than 15,000 acre-feet of unappropriated water as an average annual yield is available to Arapahoe's Union Park Reservoir Project from its points of diversion claimed in this case; and Arapahoe has failed to satisfy its burden of proof to establish that any more than that amount of water is available for its project under its claimed appropriations.

C. Because Arapahoe previously confessed that an amount of not more than 20,000 acre-feet of unappropriated water available on an average annual basis would be insufficient to assert feasibility for its Project, the Applications of Arapahoe in this case 88-CW-178 as denied and dismissed with prejudice.

DONE BY THE COURT, This 6th day of April, 1998.

Robert A. Brown, Water Judge
Water Division No. 4, Colorado

cc: all pro se parties and
counsel of record