GREEN MOUNTAIN RESERVOIR:
LOCK OR KEY?
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THE SIZE OF MOUNTAINS
The size of mountains
cannot be believed.
They're bigger than thought.
Ask a climber when he's down
or the skier who's just gotten up.
Each will say his mountain
can only be felt.

Greg Hobbs

The Colorado Water Resources and Power Development
Authority, at the request of Governor Lamm's Metropolitan
Water Roundtable, is about to undertake a feasibility study of
a water exchange project involving Green Mountain Reservoir.
This exchange project has tremendous implications for the
rights of water users in western and northeastern Colorado.
Whether a new arrangement for Colorado River operation within
the State can be implemented depends on the willingness of the
affected parties to consider substantial change in past
relationships.

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The "Green Mountain exchange" is a concept, whereby those with a substantial investment in the Colorado-Big Thompson Project (the United States and the Northern Colorado Water Conservancy District) and the beneficiaries of Green Mountain Reservoir (the Northern District and the water users of western Colorado) are being asked to consider changing legal arrangements which they made in 1937 and which have governed water planning expectations and operation of the Colorado River above the Grand Valley since that time.

According to this concept, the Denver Water Board would not pursue its planned diversions from the Eagle River, by means of the Eagle-Colorado and Eagle-Piney projects, or its planned East Gore Collection System, which would capture waters high on tributaries to the Blue River and carry them to Dillon Reservoir by gravity. Rather, Denver would pump Green Mountain Reservoir waters back up the Blue River Valley through a pipeline to Dillon Reservoir, thence to the Denver Metropolitan Area use, via the Roberts Tunnel. A reservoir or reservoirs would be built in western Colorado to replace Green Mountain Reservoir for its decreed purposes. Some persons have suggested that the "Green Mountain exchange" could be substituted for Denver's proposed Two Forks Reservoir on the South Platte River. In other words, Green Mountain and Dillon would be principal water supply reservoirs for delivery of water to Denver through the North Fork of the South Platte.
Water engineering has not been provided which would show that this "exchange" could be accomplished, with sufficient yield for Denver, while protecting those who have rights in the Colorado River above Grand Valley, including the beneficiaries of Green Mountain Reservoir. This is the primary work which the Water and Power Authority is being asked to undertake. It is uncertain what sort of "compensation" western Colorado will ask beyond replacement of the yield which Denver will take from Green Mountain through the exchange.

I. THE GREEN MOUNTAIN COMPROMISE, KEYSTONE FOR NORTHEASTERN COLORADO-WESTERN COLORADO COOPERATION, 1933-1955

Located on the Blue River below Dillon Reservoir and above the confluence of the Blue with the mainstem of the Colorado River, Green Mountain Reservoir is the key to a complex interlock of legal arrangements which presently govern the operation of the Colorado and its tributaries above the Grand Valley diversion structure near Palisade. The principal tributaries to the Colorado in this reach are the Fraser, Williams Fork, Blue, Eagle, and Roaring Fork rivers. Smaller tributaries, such as Willow Creek, Troublesome Creek, Muddy Creek, and Rock Creek, also make important contributions to the available water supply at the Cameo gauge, which is located not far above the Grand Valley intake.
With a priority date of August 1888 and a decreed diversion rate of 1800 cfs, the Grand Valley Irrigation Project has first call on the Colorado River with respect to all storage and diversion decrees upstream during the summer months. Operation of a "check" over the years has resulted in a Grand Valley demand of approximately 1000 cfs historically.

The next decree of significance on the Colorado mainstem is the direct flow Shoshone power right, with a priority of 1902 for 1250 cfs. Since this right is for year-round non-consumptive use, its fulfillment results in sufficient water being available to meet the summer Grand Valley demand. Thus, the Shoshone right, measured at the Dotsero gauge on the mainstem just below the confluence of the Eagle and the Colorado, has become the year-round door through which the demands of upstream junior rights must pass or be shut out. These "juniors" represent the preponderance of Colorado's population, including the water users of north-eastern Colorado, the Denver Metropolitan Area, and Colorado Springs. (See Attachment 1 for a listing of early decrees and their relative priorities.)

In recent years, growth of a year-round recreational industry in Grand, Summit, and Eagle counties and the nascent oil shale industry, have renewed western Colorado's long held concern that sufficient water supply be kept above the Cameo gauge to meet future needs on the western slope.
This concern is shaped by Colorado's water rights system, which rewards the early and the diligent. Those with proven need and the financial capability to persevere from concept--to claim--to conditional decree--to absolute decree are those who secure the right of continued use, whether for direct diversion for consumptive use, direct flow for power use, or storage for subsequent consumptive use, in priority as to the available supply.

Historically, western Colorado has not had the demonstrable need, nor the required financial resources to compete against the eastern slope, in the drive to make beneficial use of water. But what the western slope has lacked in need and funds it has matched by constant vigilance for its future.

In 1933, water users of northeastern Colorado, particularly those in Weld County, began to urge a large transmountain diversion, featuring a tunnel from Grand Lake through the Continental Divide into the Thompson River. A meeting of representatives called from across the State resulted in an agreement to overcome "sectional differences", in an effort to obtain federal assistance for Colorado water projects in view of California's vigorous efforts for federal funding. The conference produced a five point resolution, including the principle of one-for-one "compensatory storage" for western Colorado to offset non-municipal diversions to the east slope:
Fourth, endorsement of the general principle that every transmountain diversion project out of the Colorado River basin, other than domestic projects of municipalities, shall include as an essential part of the project construction of a compensatory reservoir on the Western Slope of sufficient capacity to hold an amount of water equal to the amount to be annually diverted unless some compensating reservoirs have been previously built.

Rocky Mountain News, September 28, 1933.

This conference produced a willingness by delegates from northeastern Colorado to consider simultaneous construction of western slope projects:

Western Slope delegates and those from Northern and Northeastern Colorado fought over minor points in connection with the proposed Grand Lake transmountain diversion, which would bring out 200,000 acre feet of water from the Colorado River into the Big Thompson, a tributary to the South Platte River.

Western Slope delegates objected to the scheme unless a dam of sufficient capacity was constructed above Grand Lake to compensate the Western Slope.

The controversy boiled for hours but finally simmered down when Eastern Slope delegates agreed they could see no reason why the dam should not be large enough to satisfy the desires of Western Slope delegates.

Rocky Mountain News, September 28, 1933.

As northeastern Colorado water users were organizing to promote the Colorado-Big Thompson Project, their counterparts on the western slope formed their own "protective association:"
Western Colorado counties which have banded together as a protective association to prevent encroachment upon their water supplies will study their entire water situation thoroughly and seek more reliable statistics on stream flow before consenting to any more transmountain diversion projects.

Directors of the protective association made this stand apparent yesterday following a conference with a northern Colorado delegation on the proposed Grand Lake diversion tunnel. Their plan of investigating the situation thoroughly was approved by the visitors, who asked only that all possible speed be employed in arriving at an understanding.

_Grand Junction Sentinel,_ April 23, 1934.

In December of 1934, water users of northeastern Colorado voted to incorporate formally the Northern Colorado Water Users Association, in order to complete negotiations with western Colorado and the United States. _Greeley Tribune,_ December 1, 1934.

A second statewide conference was held early in 1935. One of the conference organizers, J. M. Dille of Fort Morgan, soon to be the first Manager of the Northern Colorado Water Conservancy District, sounded a strident "wake-up" call:

"If we in Colorado don't wake up to the situation which confronts us we will realize before long that development and growth in Colorado are at an end," said J. M. Dille of Fort Morgan, Chairman of the Planning Commission's Committee on Water Resources. "On every side the lower states have perfected and are perfecting irrigation rights which we cannot contest except by actual construction in this state. We have spent hundreds of thousands of dollars in defending lawsuits aimed at our water
rights, but what we need is a positive program of construction rather than a negative defensive attitude. There is only one thing that will nail down a water right so that no court will disturb it, and that is application of the water to the land."

A similar view was expressed by W. S. Aupperle, western slope leader and president of the Protective Association, who joined in the call for the Grand Junction meeting. "It is our job to perfect a comprehensive and just plan of water development in Colorado . . . ."

Alamosa Courier, February 26, 1935.

With wisdom and foresight on both sides of the Divide, these discussions produced in one seminal year—1937—formation of the Northern Colorado Water Conservancy District, Colorado River Water Conservation District, and Colorado Water Conservation Board to carry forth the work which was begun by the State's Water Planning Commission and water users from northeastern and western Colorado.

The Northern District became the first of the state's forty-six water conservancy districts. People v. Letford, 102 Colo. 284, 79 P.2d 274 (1938). The River District became the first of three water conservancy districts.

Also in 1937, by reference in an appropriations bill, Congress adopted Senate Document 80, spelling out the manner of construction and operation of Green Mountain Reservoir. Of the 152,000 acre foot anticipated yield, 52,000 acre feet was set aside to replace out-of-priority diversions for northeastern Colorado and 100,000 acre feet was reserved for power
production, and existing and future beneficial consumptive uses in western Colorado.

The "Green Mountain Compromise" broke the stalemate between western Colorado's demand for acre foot by acre foot compensation, and northeastern Colorado's offer only to replace out-of-priority diversions. (See attachment 2 for exchange of correspondence leading to this historic agreement.)

What was agreed to and became fixed in Senate Document 80 is as follows, in pertinent part:

Within the Project is the Green Mountain Reservoir, a storage facility located on the Blue River, operated by the United States Department of the Interior, Bureau of Reclamation in accordance with Senate Document No. 80, 75th Congress, 1st Session (1937). Under Senate Document No. 80, the heading "Manner of Operation of Project Facilities and Auxiliary Features", provided that the project "must be operated in such a manner as to most nearly effect the following primary purposes:

1. To preserve the vested and future rights in irrigation.

2. To preserve the fishing and recreational facilities and the scenic attractions of Grand Lake, the Colorado River, and the Rocky Mountain National Park.

3. To preserve the present surface elevations of the water in Grand Lake and to prevent a variation in these elevations greater than their normal fluctuation.

4. To so conserve and make use of these waters for irrigation, power,
industrial development, and other purposes, as to create the greatest benefits.

5. To maintain conditions of river flow for the benefit of domestic and sanitary uses of this water.

In order to accomplish these purposes the project should be operated by an unprejudiced agent in a fair and efficient manner, equitable to all parties having interests therein, and in conformity with the following particular stipulations:

(a) The Green Mountain Reservoir, or similar facilities, shall be constructed and maintained on the Colorado River above the present site of the diversion dam of the Shoshone power plant, above Glenwood Springs, Colo., with a capacity of 152,000 acre-feet of water, with a reasonable expectancy that it will fill annually. Of said capacity, 52,000 acre-feet of water stored therein shall be available as replacement in western Colorado, of the water which would be usable there if not withheld or diverted by said project; 100,000 acre-feet shall be used for power purposes; and all of said stored water shall be released under the conditions and limitations hereinafter set forth.

(b) Whenever the flow in the Colorado River at the present site of said Shoshone diversion dam is less than 1,250 cubic feet per second, there shall, upon demand of the authorized irrigation division engineer or other State authority having charge of the distribution of the waters of this stream, be released from said reservoir as a part of said 52,000 acre-feet, the amount necessary with other waters available, to fill the vested appropriations of water up to the amount concurrently being diverted or withheld from such vested appropriations by the project for diversion to the eastern slope.
(c) Said 100,000 acre-feet shall be stored primarily for power purposes, and the water released shall be available, without charge, to supply existing irrigation and domestic appropriations of water, including the Grand Valley reclamation project, to supply all losses chargeable in the delivery of said 52,000 acre-feet of water, and for future use for domestic purposes and in the irrigation of lands thereafter to be brought under cultivation in western Colorado. It shall be released within the period from April 15 to October 15 of each year as required to supply a sufficient quantity to maintain the specified flow of 1,250 cubic feet per second of water at the present site of said Shoshone diversion dam, provided this amount is not supplied from the 52,000 acre-feet heretofore specified. Water not required for the above purposes shall also be available for disposal to agencies for the development of the shale oil or other industries.


On July 5, 1938, the United States and the Northern District executed the Repayment Contract for construction and operation of the CBT Project. This project has resulted in an annual average diversion of 260,000 acre-feet of Colorado River water being for use in northeastern Colorado. (See attachment 3 for a schematic of the original CBT project as completed in 1956).

Today's objections to water projects on environmental grounds tend to mirror objections which were made against the CBT project on the eve of its construction. The Adams Tunnel
would pass through Rocky Mountain National Park and, thereby, became the focus for attack:

Again, however, although the Congress had authorized the project and granted the first appropriation, the National Parks Association formed by Eastern societies and individuals made another attempt to stop the project. They induced Secretary Ickes to call another hearing to hear protests against his authorizing the Bureau to proceed with actual construction. At this hearing on November 12, 1937, a number of "Wildlife" organizations made bitter but unfounded statements against the project urging the Secretary to withhold release of the funds.


An immediate benefit of the "Green Mountain compromise" was that water users of western Colorado urged the federal Government to ignore environmental objections. (See attachment 4).

Green Mountain Reservoir, at a construction cost of $4,226,206.00, represents approximately 17% of the $25,000,000.00 amount which the Northern District obligated itself to repay for construction of the Colorado-Big Thompson Project. Construction of Green Mountain Reservoir was commenced first, in order to fulfill "the agreement with Congressman Taylor and his constituents that this feature would be built before any water was diverted to the East Slope." J. M. Dille, *supra*, at p. 30.
Due to construction delays caused by World War II and inadequate federal appropriations, the CBT Project, begun in 1938, was not completed until 1956, nineteen years later, at a total cost of $162,590,358.00. Originally, the project was projected for a six year construction period at a cost of $50,000,000.00.

Revenues from the numerous power features on the CBT project, including the 25 megawatt Green Mountain power plant, will eventually repay to the United States the total cost of the CBT project. Each year the Northern District pays half the annual operation and maintenance costs of the CBT system, including half the costs of Green Mountain operation and maintenance.

Green Mountain Reservoir has a decreed priority date of August 1935 for 154,645 acre feet of storage and 1726 cfs for power production. Denver's priority for Dillon Reservoir, upstream of Green Mountain on the Blue, is June 1946 for storage of 252,678 acre feet.

II. THE BATTLE OVER GREEN MOUNTAIN, 1955-1980

The call which Green Mountain Reservoir places on Dillon Reservoir has been a source of constant frustration for Denver. Three rounds of litigation between Denver, the United States, the Northern District, and the Colorado River District have resulted finally in a judicial determination that Denver
has no "right, title or interest" in the waters of Green Mountain, and that the United States is a "trustee" for the Northern District and western Colorado water users as operator of Green Mountain Reservoir:

The position of the United States in implementing these projects under the Reclamation Act has consistently been that of a trustee.

* * *

As previously noted, both the 1955 and 1964 decrees mandate that Denver's right to divert the waters of the Blue River is subject to the right of the United States to fill Green Mountain Reservoir each year.

United States of America v. Northern Colorado Water Conservancy District, supra, 608 F.2d at 430.

The battle over Green Mountain, culminating in the 1979 decision, was lively and often bitter. In 1955, the "Blue River Decree" was entered by the United States District Court for Colorado, pursuant to stipulation in the "Consolidated Cases" (Civil Action Nos. 2782, 5016 and 5017). These cases concluded in federal court, following decision by the Colorado Supreme Court in City and County of Denver v. Northern Colorado Water Conservancy District, 130 Colo. 375, 276 P.2d 992 (1954).

The Final Judgment, Final Decree and stipulations incorporated therein in the consolidated cases of United States of America v. Northern Colorado Water Conservancy District, et al., Civil Nos. 2782, 5016 and 5017, in the United States District Court for the District of Colorado, are approved, shall become effective immediately, and the proper agencies of the United States shall act in accordance therewith.


In the early Sixties, renewed litigation resulted in the 1964 Consolidated Cases decree, through which Denver stipulated that it had no right, title, or interest in the waters of Green Mountain Reservoir. What Denver got from this stipulation was a concession that, each year in the Spring, the Secretary of Interior could approve a limited exchange of waters, allowing Denver to keep water out-of-priority in Dillon Reservoir, with release of replacement waters elsewhere and re-payment of energy in kind for waters lost to Green Mountain power plant.

The exchange is permitted under three conditions, that the replacement waters are actually on hand, that energy is replaced in kind for power lost to Green Mountain power plant, and that the "right" to "fill Green Mountain Reservoir and to use Green Mountain Reservoir for decreed purposes will not be impaired."

Colorado Springs has the same obligation to replace energy in kind, with respect to out-of-priority diversions it makes from the Blue River upstream of Dillon.
The in-kind energy replacement obligation is figured at 210 kilowatt-hours per acre-foot, by a ratio of two-thirds on peak and one-third off peak, according to an agreement reached between the Bureau, Denver, and Colorado Springs on September 30, 1968. (See attachment 5.)

Following the 1964 stipulation, and despite its explicit language, Denver attempted once again to relieve itself of the Green Mountain right. It refused in 1977 to release 28,622 acre feet of water in Dillon belonging to Green Mountain. Denver claimed it was obligated only to pay power interference and could deprive western Colorado water users of their water in favor of an asserted Denver domestic preference.

Again, the United States, the Colorado River District, and the Northern District repelled Denver's attempt to gain the use of Green Mountain waters. The Court said that:

[D]enver cannot, at this late date, circumvent the rights afforded the participants to the stipulation incorporated into the 1955 decree.

* * *

[We cannot overlook or disregard stipulations which are absolute and unequivocal.]

United States of America v. Northern Colorado Water Conservancy District, supra, 608 F.2d at 430-431.

In the 1970's, a dispute arose between the Colorado River District and the Municipal Subdistrict of the Northern
Colorado Water Conservancy District over the Subdistrict's proposed Windy Gap Project. The Subdistrict asserted that because the CBT Project had anticipated 310,000 acre feet of annual average diversion to northeastern Colorado, but had actually resulted only in 260,000 acre feet historically, Green Mountain Reservoir should also "compensate" for additional diversions to northeastern Colorado.

Following decision by the Supreme Court in Colorado River Water Conservation District v. Municipal Subdistrict, Northern Colorado Water Conservancy District, 198 Colo. 352, 610 P.2d 81 (1979), the municipal water users of northeastern Colorado agreed, in the April 30, 1980 Windy Gap settlement agreement, to provide "compensatory storage" for the western slope, not to exceed an out-of-pocket cost of ten million dollars ($10,000,000.00), escalated or de-escalated according to a construction cost index. This commitment represents approximately 18% of the expected cost to the Subdistrict of the Windy Gap Project.

III. OPERATION OF GREEN MOUNTAIN RESERVOIR, CURRENT STATUS

On December 22, 1983, the Bureau of Reclamation published a revised set of operating criteria for Green Mountain Reservoir, which preserves 66,000 acre feet of Green Mountain water free of charge to meet water rights in western Colorado which were perfected as of 1977. 48 Federal Register 56657
The additional 34,000 acre feet of the 100,000 acre feet "compensatory" pool in Green Mountain is to be made available, through "water sales", for use on the western slope. But the Bureau's hydrological analysis of dry years in the mid-fifties shows that only 12,000 acre feet of annual firm yield can be counted on for the purpose of long-term water sales contracts.

It would make sense that the Colorado River District to become the distributing agent for Green Mountain water, so the Bureau does not end up writing many very small contracts for water distribution. The water could be "allotted" by the River District, as conservancy districts now do.

The new Green Mountain operating criteria is not expected to significantly alter the historic operation of Green Mountain Reservoir, although, if water is taken out above Dillon for Summit County uses such as snowmaking, Denver's ability to make its current Williams Fork exchanges may be affected.

From October through the middle of May, the Bureau draws down the waters of Green Mountain for power production, and replacement of CBT out-of-priority storage as necessary for the Shoshone priority. The average carryover from the summer irrigation season is 120,000 acre feet. The target for winter releases is to get the reservoir down to 40,000 acre feet by April. Winter releases are made at a steady flow rate in order to avoid icing problems on the Colorado River.
In April, following receipt of the runoff forecast, Denver is notified that it may store in Dillon out-of-priority. The Bureau maintains records of a "paper fill" of Green Mountain while Denver stores in Dillon. When the Spring runoff arrives from the Gore Range, Green Mountain stores. Fill of the 52,000 acre foot replacement pool has first priority.

If the reservoir does not fill from Gore Range runoff and from Dillon by-passes, the Bureau informs Denver that it must release sufficient water from Dillon to fill Green Mountain. Waters which Green Mountain releases during the fill period for power generation are deducted in order to determine Dillon's release obligation.

Denver may hold water in Dillon otherwise belonging to Green Mountain, if waters are available in Williams Fork Reservoir on a one-for-one replacement basis. By mid-July, Green Mountain fills and then is drawn down considerably during mid-July through September in order to meet the Grand Valley irrigation call.

Thus, a system has evolved under Senate Document 80 and the Consolidated Cases decrees which provides for the optimum use of Blue River waters, with control exercised by the Bureau through Green Mountain Reservoir. "Fill without spill" is the Bureau's watchword.

Under the proposed Green Mountain exchange concept, a "plug" would be placed in Green Mountain reservoir, except for
minimum fish flow releases. Altering the winter and summer releases from Green Mountain, as proposed by the "Green Mountain exchange" concept, could significantly affect the Colorado river between Kremmling and the mouth of the Eagle, where release from replacement storage is being suggested. The Colorado River from the Blue to the Eagle is currently used heavily by the rafting industry, centered in Grand County, during the summer months.

The "Colorado River accounting system" is currently maintained by the Bureau of Reclamation in its northeastern Colorado offices, demonstrating the key role which Green Mountain plays in administration of the River. This accounting system consists of a daily record throughout the year of all inflow, storage, diversion, and releases for all water rights above the Cameo gauge. Consisting of seventy-eight different entries, this system is utilized to determine who "owes" the river or receives "credit" for releases, and in what amount. The new Green Mountain Operating Policy envisions that the State Engineer will assume responsibility for maintaining this accounting system. When the recently authorized computer system for water accounting in Colorado comes on line, the State Engineer can administer the river on a current basis using the accounting system, properly programmed, as an operational tool.
IV. TRADING GREEN MOUNTAIN, FOR WHAT?

The "Green Mountain exchange" concept proposes operation of Green Mountain Reservoir for Denver's benefit. The multiple ironies of this proposal are fascinating.

First, the proposal was initially made by persons who have no water rights to exchange but, rather, who object to the proposed Denver Eagle-Piney, Eagle-Colorado, and East Gore projects on philosophical and environmental grounds. Yet, the "exchange", to be successful, requires the consent of those who may not share such objections to Denver's plans.

Second, Denver has not demonstrated that it has a need for the Eagle River or East Gore projects, or the capability to build them. The Colorado River District is presently in court challenging Denver's claimed water rights for these projects. The East Gore and Eagle-Piney projects would be partially located in federally designated wilderness areas, which would require a presidential waiver for construction. Thus, projects "traded" by Denver, in return for the assured use of Green Mountain Reservoir, may never have materialized.

Third, the proposed Denver Eagle River projects, if they are truly needed and financially feasible in the future, may be capable of being built in an environmentally acceptable fashion, with adequate provision for subordination to needed water uses in Eagle and Summit Counties.
Fourth, Denver's proposed Eagle River projects could result in a better distribution of diversion needs, and impacts, rather than concentrating impacts on the Blue and Fraser rivers in Grand and Summit Counties.

Fifth, water planning and the construction of projects, such as the Windy Gap Project now nearing completion, have occurred in reliance on the current status and operational characteristics of Green Mountain Reservoir, and the conditional nature of the Denver projects.

Sixth, the Green Mountain exchange, as proposed, would result in shutting down a valuable power plant while at the same time requiring considerable energy for the pump-back to Dillon.

Seventh, it is not clear that the reservoirs to be substituted for Green Mountain will provide significant new water for western Colorado use beyond replacement of what western Colorado already has through the 100,000 acre foot Green Mountain compensatory pool.

The greatest irony is that Denver has never agreed to provide the western slope compensatory storage free of cost, whereas northeastern Colorado water users have done so twice, in connection with the Colorado-Big Thompson and the Windy Gap projects. Yet the Northern District is being asked, without any palpable benefit, to consider rearrangement of its 1937 agreement with the United States and western Colorado.
It is too early to say what will be produced by the Governor's Water Roundtable discussions, the Corps of Engineers' Denver systemwide and site specific EIS studies, and the Water and Power Authority's analysis of the "Green Mountain exchange."

Absent consent by northeastern Colorado and western Colorado water users, it cannot be assumed that the "Green Mountain exchange" is capable of being implemented, or that the exchange can operate on a priority earlier than 1984. These water users will want to know if the Green Mountain exchange will have the effect of bringing the Grand Valley call onto the river sooner than it has historically, curtailing other rights. Whether a 1984 priority for the protection of all other water users with rights will produce sufficient yield to be of significant interest or benefit to Denver is questionable.

Concepts like the proposed Green Mountain exchange, because they require major policy and/or legislative changes, do not ordinarily fall within the "reasonable alternatives" which a federal agency must study in preparing an environmental impact statement. City of New York v. United States Department of Transportation, 715 F.2d 732, 743 (2nd Cir. 1983). Discussion of the exchange concept exists wholly by reason of the willingness of affected parties to continue the discussion.
This leads to one sure conclusion. The effort to "reoperate" the Colorado River in the manner suggested by the "Green Mountain exchange" requires nothing less than a basinwide study of present and future projects, which in turn requires solid water engineering - made available to the affected parties - formulation of a plan to meet the interests of all affected parties, and demonstration that all affected parties, particularly those with water rights and property interests at stake, can benefit from a new arrangement. Without this, the Denver Metropolitan Area cannot count on Green Mountain Reservoir as a source of supply, or relief from the Green Mountain call, in the near future, or ever.

In April of 1983, Denver and western Colorado representatives, at the Governor's Water Roundtable, tentatively agreed to construction of a "joint use" reservoir which would provide 15,000 acre feet of yield to Denver, in order to extend its current Williams Fork - Green Mountain exchange. Another 15,000 acre feet of yield would be available to western Colorado, on a purchase basis, requiring west slope water users to repay Denver for half the construction costs of the "joint use" reservoir. Presumably, until western Colorado has bought its water, the entire 30,000 acre foot yield would be able to Denver to exchange for Green Mountain water held in Dillon. This happens to coincide with the 30,000 acre foot call which Green Mountain is now able to exercise over Dillon by reason of its senior priority.
The concept of the "joint use" reservoir is that it would proceed in tandem with the construction of a Denver east slope storage reservoir, possibly Two Forks Reservoir. Recently, western slope water interests have taken the position that analysis of the proposed "joint use reservoir" and of the "Green Mountain exchange" must be completed before the final Denver systemwide and site specific EIS is issued and construction of a major new Denver east slope reservoir commenced, so that all possible options can be placed on the table, and all potential effects understood for discussion and possible resolution.

Spokespersons for western Colorado stress that the institutional rearrangements necessary for the full Green Mountain exchange would also be necessary to implement the "joint use reservoir" concept. But Denver has to be concerned about how long such analysis will take and whether the necessary institutional and legal changes can be accomplished, and storage facilities built, by the time new water is needed by the metropolitan area.

Analysis of the 1964 Consolidated Cases stipulation reveals an area of potential disagreement regarding expansion of the present Williams Fork-Green Mountain exchange. Denver is allowed to make a yearly exchange, without the specific replacement sources being specified and without the amount of the exchange being specified. On the other hand, the stipulation plainly provides that the right of the United
States "to fill Green Mountain Reservoir and to use Green Mountain Reservoir for decreed purposes will not be impaired."

Therefore, it appears that Denver does not have a vested right to expand its current exchange over objection of the United States and the beneficiaries of Senate Document 80.

Water users in Summit County, for example, can be expected to insist that they should be able to benefit from operation of Green Mountain Reservoir for its decreed purposes, by being able to take water out of the Blue River above Dillon and replacing this water with Green Mountain water. A very real conflict will develop if Denver attempts to prevent Summit County uses. However, Denver may be in a position to impede wintertime water withdrawals for snowmaking or other uses above Dillon, asserting its water rights and at the same time claiming that Senate Document 80 provides only that Green Mountain shall fill and the water released for power and uses downstream.

This problem again shows the interlock of rights and expectations built around Green Mountain Reservoir and the need, in light of current conditions, to reconsider Green Mountain operations if mutual benefit can be demonstrated.

V. THE PROPOSED GREEN MOUNTAIN EXCHANGE, OTHER POSSIBILITIES?

It is possible that the Water and Power authority study will show that an alternate to the present "Green Mountain exchange" concept might be the best way to proceed.
For example, instead of constructing a pipeline up the Blue River Valley, perhaps the East Gore Collection System should be built, taking water by gravity to Dillon. Once filled, a 100,000 acre foot recreational pool could be maintained in Green Mountain, taking the Green Mountain call off of Dillon. Denver would provide "replacement" and, in addition, "compensatory" water free of charge to the western slope, perhaps utilizing a combination of Wolford and Wolcott Reservoirs. The 52,000 acre foot CBT replacement pool would continue to be kept in Green Mountain Reservoir and released through the power plant.

In this way, elimination of energy capacity and addition of a costly new heavy energy load for pumping - a direct result of the present Green Mountain exchange concept - would not occur. In connection with building the East Gore Collection system and the replacement and compensatory reservoirs, adequate provision for water supply and environmental protection in Summit and Eagle counties would be made.

The Eagle-Piney and Eagle-Colorado projects would not be built. An operational regime for keeping a live stream in the stretch from Kremmling to the Eagle river, taking into account Grand County's tourist economy, would be devised. Denver would build Two Forks on the South Platte to impound South Platte, as well as imported Blue River waters, thereby taking pressure off of sole reliance on Colorado River water as Denver's source of new supply.
The Bureau, or another mutually acceptable operating entity, would operate Green Mountain and the replacement and compensatory reservoirs, as a trustee for the beneficiaries of Senate Document 80 and of the agreement which institutionalizes the new arrangement. The exchange would be subordinated to CBT, Windy Gap, and River District water rights.

The United States Fish and Wildlife Service would find some way of conserving the Colorado River squawfish and the whooping crane, other than prohibiting Colorado's use of its full compact apportioned flows or interfering with the exercise of Colorado water rights.

Concepts like this, and others yet to be thought of, need to be explored before the proposed "Green Mountain exchange" concept is fixed in the minds of negotiators and decisionmakers.

VI. BARGAIN AND TRADE, CROSSING THE WATERS

The Northern District, before it agrees to any change in the current legal status governing Green Mountain Reservoir, whether for purposes of the "joint use reservoir," or the "Green Mountain exchange," or any other arrangement, wants to be sure that the full yield to northeastern Colorado of the CBT Project (260,000 acre feet annually) and the Windy Gap Project (65,000 acre feet annually, ten year running average) is protected, and that future water development needs
of northeastern Colorado within the boundaries of the Northern District are not foreclosed.

The proposed Cache Poudre River Wild and Scenic designation must be a part of this discussion, because it is clear to northeastern Colorado water users, as a result of the Windy Gap negotiations and the current Denver-western Colorado dispute, that additional transmountain diversions from the Colorado River basin may have impacts which western Colorado will not accept. The Northern District has committed itself to pursuit of water conservation opportunities within the district's boundaries, in order to meet future needs. The Poudre River passed over 500,000 acre feet last year, lost to the Northern District area because of lack of management facilities in the Poudre basin.

The District has water rights in the mainstem of the Poudre River in the Idlywilde to Grey Mountain reach. The District cannot countenance a Poudre River designation which will lock-up reservoir sites which may be needed for the future of northeastern Colorado, while at the same time the District's rights and interests in Green Mountain Reservoir are made the subject of suggested bargain and trade. (See attachment 6 for additional points which the Northern District has made regarding the "Green Mountain exchange.")

Those who propose the current "Green Mountain exchange" concept do so in the name of better water management, preservation of environmental values, water for the
Denver Metropolitan Area, and leaving water for future development in western Colorado. Such planning cannot occur in isolation from the needs and plans of northeastern Colorado which, historically, has demonstrated a willingness to work with and resolve the water development and environmental concerns of others, in the course of pursuing its own interest.

It is said that Wayne Aspinall, shortly before his death, cautioned western Colorado water leaders against giving up Green Mountain Reservoir, the key to the Colorado River which the Western Slope Protective Association fashioned forty-six years ago. A key is no good when the lock has been changed. On the other hand, if interconnected doors can be opened using the same lock and key, we may find that Colorado's family can live under the same roof.

On June 17, 1937 the Grand Junction Sentinel heralded agreement between western Colorado and northeastern Colorado with the following editorial. Perhaps this editorial may be repeated one day in the near future, this time with Denver as a part of the historic "Green Mountain compromise," in renewed form:

ALL TOGETHER FOR COLORADO

The long-waged battle between eastern and western Colorado over the Grand Lake diversion project has at last come to an end, according to reports from Washington. The peace terms were reached, as in all such controversies, thru a process of give and take; but, in the east slope's being
empowered to take, the western slope now feels assured it is not giving away either rights or water necessary for its present use or future development. The building of the Green Mountain reservoir, or similar facilities for storage purposes, will, in the opinion of the delegates, afford the compensation demanded by the western slope ere it would agree to this diverting of its waters. The final agreement also assures protection to the vicinities that shall be most immediately affected by the project.

The intrastate conflict now apparently ended, the citizens of all Colorado should reunite their powers and influence toward the speedy construction which now hinges on a congressional appropriation. The reclamation service has put its approval upon the project; Colorado's congressional delegation will unite to secure this appropriation, but there are always eastern foes of reclamation; and anyone cognizant of California's plans easily concludes she is hopefully eyeing the waters and the power facilities of the Colorado that rightfully belong to our state. Procrastination in securing to ourselves the uses of this great stream may easily result in its being lost to us forever.

The agreement reached between the eastern and western slopes over the Grand Lake diversion definitely serves notice that the people of Colorado are awake, tho tardily, to the seriousness of this probability, and will unitedly fight to preserve Colorado River waters for Colorado.

Grand Junction Sentinel, June 17, 1937.
<table>
<thead>
<tr>
<th>Name</th>
<th>Source</th>
<th>Decree Date</th>
<th>Amount</th>
<th>Remarks</th>
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<tr>
<td>Grand Valley Irrigation</td>
<td>Main Stem</td>
<td>Aug. 1888</td>
<td>1800 cfs</td>
<td>Sum of decrees exceed 1800 cfs but 1800 cfs considered requirement</td>
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<tr>
<td>Grand River Ditch</td>
<td>Main Stem</td>
<td>Feb. 1908</td>
<td></td>
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<tr>
<td>Blue River Power Plant</td>
<td>Main Stem</td>
<td>Jan. 1902</td>
<td>1250 cfs</td>
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<tr>
<td>Eagle Ditch</td>
<td>Eagle River</td>
<td>June 1906</td>
<td>18 cfs</td>
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<td>50 cfs</td>
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<tr>
<td>Moffat Tunnel</td>
<td>Fraser R. &amp; Tribes</td>
<td>Apr. 1921</td>
<td>1250 cfs</td>
<td>Denver Municipal</td>
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<tr>
<td>Jones Pass Tunnel</td>
<td>Williams R. &amp; Tribes</td>
<td>Apr. 1921</td>
<td>Tunnel Cap. 620 cfs</td>
<td>Denver Municipal - now routed via Moffat Tunnel</td>
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<td>Hoosier-Ivanhoe Tunnel</td>
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<td>June 1921</td>
<td>130 cfs</td>
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<td>Prescot Pass Ditch</td>
<td>Blue River</td>
<td>June 1927</td>
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<td>Mara Ditch</td>
<td>Eagle River</td>
<td>June 1929</td>
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<td>Hoosier Tunnel</td>
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<td>Colubrine Ditch</td>
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<tr>
<td>Twia Lakes Tunnel</td>
<td>Roaring Fork</td>
<td>Aug. 1930</td>
<td>Tunnel Cap. 600 cfs</td>
<td>Trans. Mt. Div. to Arkansas</td>
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<tr>
<td>Adams Tunnel</td>
<td>Colorado R.</td>
<td>Aug. 1935</td>
<td>Tunnel Cap. 550 cfs</td>
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<td>Green Mtn. Power</td>
<td>Blue R.</td>
<td>Aug. 1935</td>
<td>1726 cfs</td>
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<td>788 cfs</td>
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<td>June 1946</td>
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<td>May 1948</td>
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<td>Hoosier Reserv. Storage</td>
<td>Blue R.</td>
<td>May 1948</td>
<td>5796 cfs</td>
<td>Colo. Springs Municipal</td>
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<td>Rocky Mtn. Forest Hardy</td>
<td>Main Stem</td>
<td>May 1952</td>
<td>759 cfs</td>
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<td>Kurek Ditch</td>
<td>Tomahawk Creek</td>
<td>Max. 4 cfs</td>
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**COLORADO RIVER ABOVE CAMPO GAUGE**

**EARLY PRIORITIES**

ATTACHMENT 4
Thomas A. Nixon  
C/o Northern Colorado Water Users' Ass'n  
Greeley, Colorado.

Dear Mr. Nixon:

Your letter of December 17th, relative to the use of the Colorado River, is at hand. The proposal you set forth is not an acceptable basis of settlement. It seems to me it does no more than to commit you to refrain from interfering with the rights we have already perfected to the use of water on this side of the Divide. However, after our conference at Denver the other day, I met with a number of men from the Western Slope who attended the conference and it was the consensus of opinion of all present that we would like to work out some amicable and satisfactory compromise upon which we can proceed with some degree of assurance as to the future use of the waters of the Colorado River.

With this in view, and also in view of the proposal I received from you, I am suggesting that a small committee, not over three of four members from your association and a like number of men from the Western Slope, meet at Denver at the Shirley-Savoy Hotel on the afternoon of the 5th of January, 1937, and the following day to see if we can formulate a plan along the lines indicated.

The members of our committee are holding the date mentioned open, and I should appreciate it very much if you would advise me at once whether you care to meet with us.

Yours truly,

(Sd.) Frank Delaney

FD:

c/c Charles Hansen  
C/o Northern Colorado Water Users' Ass'n  
Greeley, Colorado.

c/c William R. Kelly  
C/o Northern Colorado Water Users' Ass'n  
Greeley, Colorado.

Attachment 2 (cont.)
Greeley, Colorado,
December 16, 1926.

Mr. Frank Delaney,
Glenwood Springs,
Colorado.

Dear Sir;

The time is approaching when we are confident that the representatives of both the Western Slope and Eastern Slope of the Divide are desirous of arriving at a satisfactory solution of the use of the surplus waters in the Colorado River for the conservation of the waters for the benefit of the State of Colorado.

The survey of the Colorado-Big Thompson Project is practically complete. A study of the uses of the water indicates that the control point of the supply of water for the Western Slope is located at the Shoshone electric plant near Glenwood Springs.

From a study of the river's supply it would seem that when the water supply along the main stem of the Colorado River is such that the appropriation for the Shoshone plant is supplied with the normal flow of the river, all other appropriations for irrigation are likewise supplied.

As a possible solution for utilizing the water of the Colorado River, we propose that whenever the natural flow of the river at said control point shall fall below 1250 feet per second of time, the natural flow of said river shall not be detained or diverted by or for said Colorado-Big Thompson Project, unless an amount equal to the amount of water detained or diverted from the natural flow be replaced in said River above said control point from other sources, so that the River at said control point shall always have the natural flow the same as though no water were being detained or diverted for said project.

The above plan is an insurance against interference with the present and future rights of use of water to the water users of the Western Slope and a means of stabilizing the flow of the River for all water users including the Shoshone plant, but nevertheless to continue as a method of control whether the water is put to its present uses or otherwise.

In submitting this proposition, we feel that the Colorado River by this method will always be guaranteed the present natural flow of the River at all times except for the surplus waters of which no use has or can be made by the water users of the Western Slope and furnishes a method whereby an absolute check can be made at all times as a guarantee that the diversion project will not interfere with the present or future use of water now flowing by all points from the Shoshone plant to the Colorado State line.

(Sd.) THE NORTHERN COLORADO WATER USERS ASSOCIATION,

By (Sd.) Chas. Hansen, Its President,

(Sd.) Thomas A. Nixon

(Sd.) William A. Kelly,

Attorneys.
June 11, 1937.

Honorable Harold L. Ickes,

Secretary of the Interior.

My dear Mr. Secretary:

There is attached hereto the portion of the report on the Colorado-Big Thompson project in Colorado covering the principles and stipulations governing the construction and operation of said project for the protection of the rights and interests dependent on the Colorado river in Colorado.

The provisions contained therein have been considered by the Northern Colorado Water Users Association, representing the irrigation and other interests on the Eastern Slope in Colorado, and we respectfully submit that they are satisfactory and meet the approval of said association.

We ask that acknowledgment be made of this communication.

Respectfully yours,

NORTHERN COLORADO WATER USERS ASSOCIATION

By /s/ Chas. Hansen
President

/s/ M. E. Holman
Vice-President

/s/ /s/
Attorney.

Enclosure.

Attachment (encit.)
July 29, 1937.

D. W. Aupperle, President
Western Colorado Protective Association,
Grand Junction, Colorado.

Dear Mr. Aupperle:

Not much can be said in reply to your splendid letter of the 27th inst. except a great big AMEN to all the things therein expressed. When I look back over the four years of negotiations, I marvel, as you do, at the friendly good feelings that have always prevailed at all of our meetings, and the fairness with which everybody has tried to treat the difficult problems that confronted us.

While the groundwork for the final agreement was no doubt built over a long period of time, the more intensive work of drafting the final terms of settlement was marked by the finest of cooperative effort. So far as I could see there was never any idea on either side of driving a sharp bargain, but an earnest effort on the part of each to clear up knotty points. Attorneys, as well as laymen, on both sides tried their best to work for the interests of all.

Personally, I feel that not only have the two slopes been united in a friendship that should have been cemented long ago, but friendships among the individuals upon whom have fallen the task of working out the details of the plans, have been formed that I hope may last as long as any of us shall live. Many more things could be said in the same vein, but I doubt if mere numbers of words would help to indicate how much "we 'uns now think of you 'uns".

Like yourself, we also congratulate ourselves on having become acquainted with that splendid group of men that comprise the U. S. Bureau of Reclamation. I hope we all may have as happy and satisfactory dealings with them for many years to come as we have had the past two or three years.

Very sincerely,

THE NORTHERN COLORADO WATER USERS ASSOCIATION.

By (Sd.) Chas. Hansen,
President.
November 8, 1937

Honorable Harold I. Ickes
Secretary of the Interior
Washington, D. C.

Dear Mr. Secretary:

Your official invitation to Mr. Simon Smith as Secretary of the Western Colorado Protective Association to attend a conference concerning the proposed Grand Lake - Big Thompson Water Division Project in Colorado is hereby acknowledged.

We appreciate this courtesy on your part, but must advise you that it is not practicable for Mr. Smith to make the trip at this time.

It seems to us that the records already clearly and strongly establish the practicability, desirability and the necessity of this project.

After very careful consideration and many conferences on the part of the people in Western Colorado and the proponents of this project in Northern Colorado, a very carefully considered agreement was reached and transmitted to your office on June 12, 1937. This agreement provided, in our opinion, water most necessary for the stability of Northern Colorado, and at the same time protects the present and future interests of Western Colorado in so far as this project is concerned.

Our organization has carefully watched the development of these plans during a number of years. We have taken a very direct interest in the proceedings. We have studied many angles of the case -- the economic and the sentimental sides of the question. We believe that a calm and fair understanding and agreement was reached between Western Colorado and the Northern Colorado proponents of the project, and that except for such agreement Western Colorado would have suffered severely from this water diversion. We have a great deal at stake.

Attachment 4
We have confidence in the report made by the Reclamation Bureau based upon a thorough investigation showing the practicability of the project. We are convinced of the desirability and need for this water in Northern Colorado and the incident protection in Western Colorado. There is probably no other place where it can render an equal amount of benefit.

The principle of giving aid to developed irrigation areas is well established, and nearly twenty years ago Mr. Arthur J. Davis, then Director of the Reclamation Service, stated that in his opinion it is just as much within the province of the Reclamation Service to render aid to established projects in need of aid, as it is to build projects for developing new land areas, provided, of course, that the developed projects are sound and worthy.

As indicated before, we believe the Northern Colorado situation is sound and worthy and greatly in need of this supplemental supply of water.

We recognize that there is also a sentimental side; and we have no quarrel with those who have opposed this project for sentimental reasons. We sympathize with them -- in fact, we cooperated with them to the extent of demanding that scenic attractions, recreational features and sportsman interests in fishing streams and kindred activities on the western side of the mountain range should be fully protected before we endorsed this diversion plan. There is no doubt that the people of the Western Slope of Colorado will maintain this attitude towards any possible future diversion proposals.

We are firm in our conviction that these interests will upon the whole have greater protection and will be better safeguarded by the operations of the Reclamation Bureau in this case than under present private practices.

We believe that those who are responsible for the welfare of our national parks and who are justly zealous in support of these important public interests will find in this particular case the proposed development will prove an attraction to tourists and pleasure seekers rather than an objectionable feature. Where except in Estes Park and Grand Lake and the Rocky Mountain National Park can tourists find such natural attractions plus an exhibition of the handiwork of men in cooperating with the forces of nature in the interests of progress and public welfare?

The contemplated reservoirs will be veritable lakes with attractive features, adding much to the charm and beauty of their immediate surroundings. The construc-
tion of these reservoirs is a tremendously important step in the right direction -- that of storing waters in these high altitudes for beneficial use.

We believe any fear on the part of the National Park Service or others that this project might set an embarrassing precedent for the future is not well founded. Every project has its individual determining features, and each project should be based upon facts rather than precedent.

We have been endeavoring to represent Western Colorado interests and refused to approve this project as originally proposed because, in our opinion, certain established and prospective rights were not properly safeguarded. We are convinced that the agreement reached on June 13, 1937, when fully carried out without alteration, will be the best and fairest solution of the use and protection of these waters and that justice will result to the two portions of the state involved.

We feel that the approval of the project is fully justified and that the benefits will be so far reaching and positive that they will greatly outweigh any possible injury to any persons or interests. The agreement, as developed, seems to us to be singularly successful in meeting the demands of a rather complicated, but important situation; and it is fully contemplated by the agreement as reached that the scenic beauties and attractions will be protected from commercialization.

Regretting our inability to be personally present at your conference, we remain

Very respectfully,

WESTERN COLORADO PROTECTIVE ASSOCIATION

By ____________________________

D. W. AUPPERLE

President

SILMON SMITH

Secretary
POLICY AND COMPUTATION METHODS FOR GREEN MOUNTAIN POWERPLANT POWER INTERFERENCE CAUSED BY THE CITIES OF DENVER AND COLORADO SPRINGS

1. Power interference is computed daily and is based on the amount of water withheld and/or diverted (net depletions) by the cities of Colorado Springs and Denver. The net depletions in acre-feet are computed from average daily flow rates and end-of-day storage contents and can be either positive or negative. A positive figure constitutes a debit to the power interference account while a negative is handled as a credit.

2. During days when Green Mountain Reservoir spills the cities are not charged interference for that day on net positive depletions irrespective of the magnitude of the spill or net depletion. Net depletions that are negative during days of spill are considered as a credit to the interference account.

3. In accordance with agreements reached in 1968 the daily net depletions in acre-feet are converted to power values by using the factor of 210 kilowatt hours per acre-foot.

4. A daily accounting of interference caused, energy returned, and total outstanding energy owed is maintained for both cities. In the past, the cities have not been allowed to prepay future power interference (or build up a balance credit).

5. Compensation for power interference caused by the cities is made in the form of energy. The power is returned on a mutually satisfactory schedule developed between the respective municipalities and the Bureau's project office at Loveland. In accordance with prior agreements the total energy returned is to be two thirds on peak and one third off peak. Within the practical limits of one day's scheduling the account is zeroed out on or before April 1 of each year.
November 11, 1983

Mr. Ival V. Goslin, Director
Colorado Water Resources and
Power Development Authority
Suite 217
1390 Logan Street
Denver, Colorado 80203

Re: Study of "Joint Use" Reservoir and Green
Mountain Exchange

Dear Ival:

Northern Colorado Water Conservancy District and Municipal
Subdistrict, Northern Colorado Water Conservancy District, have
previously stated their willingness to work with the Metropolitan
Water Roundtable, its committees, interested parties, and the
Water and Power Authority to study the proposal for a "joint use"
reservoir and a Green Mountain exchange. We believe it to be in
the interest of all concerned to state our initial views regarding
such study or studies.

1. The 52,000 acre-foot replacement pool in Green
Mountain Reservoir for replacement of Colorado-Big Thompson
storage and diversion to northeastern Colorado must be made
available each year and operated so that CST diversions are
fully protected. We express a preference that this pool
remain in Green Mountain Reservoir and continue to be oper­
aTed by
the Bureau of Reclamation or the Northern District.

2. The proposed "Green Mountain Operating Policy," as
revised by the Regional Office of the Bureau of Reclamation
and dated September 8, 1983, will define the operation of
Green Mountain Reservoir and used as the basis by which any
proposal for exchange or change of water rights will be
analyzed and measured.

3. The water rights decrees for the CST, Windy Gap
and Azure projects, and all rights which could call out such
decrees, will be included in all studies of yield and project
development scenarios. A list of those decrees is attached.
4. The beneficiaries of Senate Document 80, i.e., western Colorado and northeastern Colorado, shall enjoy all benefits of Senate Document 80 under any alternate arrangement. Green Mountain Reservoir shall remain operational under Senate Document 80, the Consolidated Cases decrees and existing legislation, as a backup to guarantee performance of any alternate arrangement.

5. Transmountain diversions to the metropolitan area which are made possible through use of Green Mountain facilities or use or exchange of waters which would otherwise be available in Green Mountain Reservoir must be subordinated to CBT, Windy Gap, and Azure decrees.

6. Operation and maintenance costs of the Northern District for Green Mountain Reservoir shall be assumed by those who benefit from Green Mountain pro rata to their acre-foot by acre-foot benefit from Green Mountain use, whether direct use or by exchange. In addition, a construction cost component of the Northern District's repayment for construction of Green Mountain Reservoir shall be paid to the Northern District.

7. Any energy and capacity lost as a result of water not going through the turbines at Green Mountain Reservoir must be replaced in kind. The historic annual average generation at Green Mountain Reservoir will be utilized as the basis for determining this replacement obligation.

8. For purposes of analysis the annual yield of Green Mountain Reservoir shall be 154,000 acre-feet and an additional 6,316 acre-feet representing the refill decree.

9. The minimum stream flow right of the Colorado Water Conservation Board, pursuant to the Windy Gap Settlement Agreement, shall be protected. A copy of the agreement between the Municipal Subdistrict and the Colorado Division of Wildlife defining this flow is attached.

10. Fishing and recreational uses of Green Mountain Reservoir shall be maintained.

11. All effects of diversion, storage, exchange, transfer or change of water rights for purposes of the joint use reservoir and Green Mountain exchange plans must be analyzed and disclosed in relation to existing and proposed projects of the Northern District, Municipal Subdistrict of the Northern District, Colorado River District, and Bureau of Reclamation in the Colorado River Basin within Colorado.
12. The State Engineer must be able to effectively administer any exchange plan, and an acceptable operating entity must be identified.

13. Consideration should be given to use of Gross Reservoir and the waters therein for the benefit of the area within the southern part of the Northern District.

14. A technical oversight committee to draft a scope of work and oversee conduct of work by contractors regarding the "joint use" reservoir and Green Mountain exchange should be appointed to include the State Engineer and technical advisors from the Denver Water Department, the Bureau of Reclamation, Northern Colorado Water Conservancy District, Colorado River Water Conservation District, and the "environmental caucus."

We look forward to working with you in this endeavor.

Sincerely,

Larry D. Simpson, Manager
Northern Colorado Water Conservancy District and Municipal Subdistrict, Northern Colorado Water Conservancy District

LDS: jm
Enclosures
ccs: Honorable Richard D. Lamm
Metropolitan Water Roundtable Exchange Committee
## A Listing of Water Rights Decrees for CST, Windy Gap, and Azure Projects

### Colorado-Big Thompson Project (Colorado River, Blue River, Willow Creek)


<table>
<thead>
<tr>
<th>Structure</th>
<th>Date of Appropriation</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Alva B. Adams Tunnel</td>
<td>August 1, 1935</td>
<td>550 c.f.s</td>
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<tr>
<td>Granby Reservoir</td>
<td>August 1, 1935</td>
<td>543,758 AF</td>
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<tr>
<td>Granby Pump Canal</td>
<td>August 1, 1935</td>
<td>1,100 c.f.s</td>
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<td>Willow Creek Reservoir</td>
<td>August 1, 1935</td>
<td>10,653 AF</td>
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<td>Willow Creek Feeder Canal</td>
<td>August 1, 1935</td>
<td>400 c.f.s</td>
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<tr>
<td>Shadow Mountain and Grand Lakes</td>
<td>August 1, 1935</td>
<td>19,669 AF</td>
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<td>Green Mountain Reservoir</td>
<td>August 1, 1935</td>
<td>154,645 AF</td>
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<tr>
<td>Green Mountain Reservoir Refill</td>
<td>August 1, 1935</td>
<td>6,316 AF</td>
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<tr>
<td>Green Mountain Power Plant</td>
<td>August 1, 1935</td>
<td>1,726 c.f.s</td>
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### Windy Gap Project (Colorado River and Willow Creek)

See decrees in Civil Action Nos. 1768, 80 CW 108 and W-4001, State of Colorado Water Division No. 5, October 27, 1980

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<tr>
<td>Windy Gap Pump, Pipeline and Canal</td>
<td>June 22, 1967</td>
<td>300 c.f.s</td>
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<tr>
<td>Windy Gap Reservoir</td>
<td>June 22, 1967</td>
<td>1,546.14 AF</td>
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<tr>
<td>Jasper Pump and Pipeline</td>
<td>June 22, 1967</td>
<td>300 c.f.s</td>
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<td>Jasper Reservoir</td>
<td>June 22, 1967</td>
<td>11,292.58 AF</td>
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<td>Windy Gap Pump, Pipeline and Canal, First Enlargement</td>
<td>July 9, 1976</td>
<td>100 c.f.s</td>
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<td>Windy Gap Pump, Pipeline and Canal, Second Enlargement</td>
<td>April 30, 1980</td>
<td>200 c.f.s</td>
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**Azure Project**  (Colorado River)

See Water District 53, Case No. 1277 (10-19-62) and Case No. 1416 (9-3-67); State of Colorado Water Division 5 Case Nos. W-3991, 1548 (7-9-79), 82 CW 419, 420, 421, 422, 423 (4-15-83).

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<th>Structure</th>
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<tr>
<td>Azure Reservoir</td>
<td>July 21, 1958</td>
<td>25,583.6 AF</td>
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<td>Azure Reservoir First</td>
<td>July 21, 1958</td>
<td>63,803.5 AF</td>
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<td>Enlargement</td>
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<tr>
<td>Azure Reservoir Refill</td>
<td>July 21, 1958</td>
<td>89,397.1 AF</td>
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<td>Azure Reservoir Power Conduit</td>
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<td>and Power Plant, First Enlargement</td>
<td>Sept. 29, 1978</td>
<td>1,000 c.f.s.</td>
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<tr>
<td>Azure Pump Storage Plant and Pipeline</td>
<td>Dec. 10, 1982</td>
<td>10,000 c.f.s.</td>
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<tr>
<td>Trough Valley Reservoir</td>
<td>Dec. 10, 1982</td>
<td>10,000 c.f.s.</td>
</tr>
<tr>
<td>Radium Powerplant</td>
<td>Dec. 10, 1982</td>
<td>2,000 c.f.s.</td>
</tr>
<tr>
<td>Radium Reservoir</td>
<td>Dec. 10, 1982</td>
<td>4,000 AF</td>
</tr>
</tbody>
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*Attachment 6 (cont)*
MEMORANDUM OF UNDERSTANDING BETWEEN MUNICIPAL SUBDISTRICT, NORTHERN COLORADO WATER CONSERVANCY DISTRICT AND DIVISION OF WILDLIFE, COLORADO DEPARTMENT NATURAL RESOURCES, RELATING TO MINIMUM STREAM FLOW IN ASSOCIATION WITH THE WINDY GAP DIVERSION PROJECT.

The Municipal Subdistrict, Northern Colorado Water Conservancy District, and the Division of Wildlife, Colorado Department Natural Resources, in the matter of a minimum stream flow from the Windy Gap Diversion site to the mouth of the Blue River, agree as follows:

(1) The Subdistrict and the Division of Wildlife agree to fixed rates of flow as follows:

A. From Windy Gap Diversion Point to the mouth of the Williams Fork River: 90 cfs
B. From the mouth of Williams Fork River to the mouth of the Troublesome Creek: 135 cfs
C. From the mouth of the Troublesome Creek to the mouth of the Blue River: 150 cfs

(2) Once in every three years, if equivalent flushing flows do not otherwise occur past the Windy Gap Diversion Point, Subdistrict shall release on call by the Colorado Water Conservation Board, on the recommendation of the Division of Wildlife, a total of 450 CFS of water for fifty hours, or its equivalent, during the period of April 1 through June 30, for flushing flow purposes.

Such call cannot be made sooner than each third consecutive calendar year figured from the year of the initial diversion of the Windy Gap facility, except upon mutual agreement of the Subdistrict and the Division of Wildlife. Each subsequent call shall be figured from the calendar year of the immediately preceding flushing flow, which has either occurred naturally or as a result of a call, as set forth above. The Subdistrict and Division shall agree upon a mutually acceptable pattern for each such release.
(3) It is understood that the Subdistrict cannot be required to bypass amounts of water in excess of the natural inflow to the Windy Gap Diversion Point.

Dated this 23 day of June, 1980.

Earl Phipps, Manager
Municipal Subdistrict,
Northern Colorado Water Conservancy District

Jack R. Grieb, Director
Colorado Division of Wildlife

attachment 6 (cont.)