

One person's view of a park in peril

Union Park hangs

By TOM REED

Times Editor

Different people see Union Park different ways.

To some, the broad expanse is a look into the past, perhaps a suggestion of what Taylor Park was once like before Taylor Reservoir filled most of it.

Others close their eyes and envision water and money.

In the last 100 years, Union Park has seen a lot of changes. But the next few decades could be the most dramatic for the park. The Front Range county of Arapahoe has purchased a plan to build a reservoir which would flood Union Park with one of the largest bodies of water in the state. A pipeline would run beneath the Continental Divide, carrying Western Slope water to lawns and toilets in the metropolis of Denver.

In the meantime, a battle over the park has filled the water courts of the Western Slope with lawyers and the lawyers' pockets with cash. It's a fight between residents of Colorado which promises to carry on for at least a dozen years.

Late in the 1800s, Union Park was the target of a hardy breed of man commonly known as prospectors. They came into the park in droves, exploring and staking out claims by the dozens. Old placer claims and

ies which put places like Pitkin, Ohio City and Gold Creek on the map.

Eventually, the placer played out and the ore dwindled. But cattlemen saw the park for what was above the ground -- grass. A cow camp was built at the head of Union Canyon and ranchers in the Tomichi Valley ran their herds up to the park and summered them in the sage and grass along Lottis Creek and in Taylor Park to the north.

For several generations, the park has been an important part of ranching in the Gunnison area, but things change. Nowadays, ranchers along Tomichi Creek have fallen on hard times and the number of cattle in Union and Taylor parks has plummeted.

Today, the park plays host to a smattering of fishermen who cast for trout in meandering Lottis Creek or cast into the beaver ponds of Cameron Creek or bushwhack to high mountain lakes near the park. An occasional family picnics in the park, enjoying the broad vistas from the Continental Divide, south to Fairview Peak. A few hikers, horsemen and motorcyclists try out the trails in and around the park, but for the most part, Union sits waiting out its fate while the lawyers get rich.

What a rancher or an outdoorsman might see one way, an engineer sees

Outdoors

erson's view of a park in peril

Union Park hangs in the balance, awaiting its fate

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on the slopes of Fairview Peak to the
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to the north out of the mountains,
slowed by the industrious beaver



Lottis Creek winds through Union Park, on
the west, meandering through the expanse, L
(right) has been used by generations of rancher

As it arrives in the park, it doglegs to
Canyon (left). Union Park Cow Camp

(Photo by Tom Reed)

Getting to Union Park

before emerging into the park. Here,
the stream takes a dogleg to the the
west, flowing into the head of Union
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Union Park Cow Camp, that
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The reservoir would cover the

Late in the 1800s, Union Park was the target of a hardy breed of man commonly known as prospectors. They came into the park in droves, exploring and staking out claims by the dozens. Old placer claims and workings can still be seen in the broad, grassy bottom of the park and mines dot the hills around it. Just to the south of the park were the ore bod-

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Getting to Union Park

Union Park is not hard to find and is an easy drive from Gunnison.

To reach the park, travel north on Highway 135 to Almont. At Almont, take the Taylor Canyon Road to the east, traveling up scenic Taylor Canyon. Once out of the canyon and in Taylor Park, travel along the rim of Taylor Reservoir. Where the road bends to the north near Cranorville, take a right before the bridge crossing Willow Creek. Follow this dirt road for about a half mile to Forest Service road 752. This good dirt road climbs up through a forest of lodgepole pine before dropping over into Union Park.

One can continue on this road to Union Park Cow Camp and Lottis Creek, or can follow any one of a dozen small dirt roads leading off into the timber. Stunning views of Fairview Peak are to the south and the Continental Divide is viewed to the north from the other side of the park.

Lottis Creek is filled with small brown trout, which readily take a small flies or bait. Other tributaries, the most prominent of which is Cameron Creek, offer fishing in beaver ponds for brown and brook trout.



before emerging in the stream takes a west, flowing into Taylor Canyon. It is at the Union Park Cow Camp Arapahoe County dam.

The reservoir sage and grass of the lodgepole forest entire park. It would camp, the remnants of a long past, and the mud-filled stream.

In return, a vast reservoir would be pipeline pumping water from Taylor Reservoir to the new pipeline pumping water to the Front Range. Though perhaps a future lake as a top it seems hard to be mackinaw will be shallow, where a pump turbs the thermocline ent water temperature even hourly basis. Such could also harm the fishing in Taylor Res

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In return, a vast, relatively shallow
reservoir would be born, with a
pipeline pumping water from Taylor
Reservoir to the new lake and another
pipeline pumping water to the Front
Range. Though proponents tout the
future lake as a top lake trout fishery,
it seems hard to believe that trophy
mackinaw will thrive in a lake so
shallow, where a pumping station dis-
turbs the thermocline (levels of differ-
ent water temperature) on a daily, or
even hourly basis. Such a disturbance
could also harm the existing trout
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During much of the year, it is
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This view of Union Park is
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The choices, are fairly simple: a mudflat and a sterile bathtub of a lake, or a wild park. It all depends on one's point of view.

Once Union Park is gone, it's gone for good.



This view of Union park. The proposed pipeline would carry

throughout the park. The area was the ng activity in Gunnison County during

SKI??

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Comment

Powers that be have ignored options to Two Forks Dam

Denver Water Department has systematically suppressed the examination of viable water alternatives

The scandalous Two Forks Dam project is fast becoming a major national embarrassment for Colorado. Unfortunately, Colorado's leaders seem afraid to stop the dam's federal permitting before our state's

ently endorsed DWD's dream of damming the South Platte.

This endorsement was then used in 1985 to convince Colorado's naive Legislature to pass H.B. 1088, authorizing "a major multipurpose water project for the benefit of the Denver metropolitan area on the South Platte River."

Because of these supposed mandates from Colorado's governor and Legislature, the Corps felt safe in limiting the study to South Platte dam sites and conservation measures.

In response to the Corps' Final EIS, Gov. Romer is now trying to carry water on both shoulders with his June 10, 1988, statement on Two Forks. He is inhibiting the better options by asking the Corps to issue a 25-year permit to construct Two Forks as an "insurance policy" for future growth. He has also created water development confusion by saying, "Colorado should build Two Forks only as a last resort."

Meanwhile, DWD continues to intimidate the governor and Colorado's water establishment with its threat to cut off future water taps to the 42 dependent metro Denver water districts if they don't blindly support Two Forks. Under the guise of "metro cooperation," DWD has made water blackmail into a fine science.

If Gov. Romer is really serious about alternatives, he should immediately ask the Corps to issue a supplemental environmental impact statement that considers at least three of the major ongoing structural alternatives that were conveniently "overlooked" in the study process.

For example, DWD already has a major study that indicates its Green Mountain Exchange Project is less damaging and more efficient than Two Forks. In fact, DWD recently filed on the Green Moun-

tain water rights as a backup to Two Forks.

Thornton's ongoing City-Farm Recycling Project is another ignored option that could be expanded and accelerated to provide more water, for less cost and damage, than Two Forks. If metro Denver would use only a small portion of the irrigation waters currently being diverted from the West Slope before it is recycled to East Slope farms, the need for additional use of the Upper Colorado headwaters would be greatly reduced.

Arapahoe County's ongoing project to use a fraction of the vast surplus flood flows of the untapped Upper Gunnison is the third major water alternative that has been systematically ignored. Highly respected international engineering firms have recently estimated that a large, off-river conservation reservoir at Union Park on the Gunnison side of the Continental Divide could increase the efficiency of Denver's system 40 percent more than Two Forks for about 60 percent of the cost.

Curiously, all of these major structural alternatives are hardly mentioned in the EIS, while being diligently pursued by metro Denver's largest public entities.

Colorado supports 70 percent of our nation's water attorneys, who pride themselves on how well our system works in allocating the state's water resources for the public's greater good. However, when powerful non-elected officials can use old water rights and economic intimidation to demand "cooperation" from Colorado's leaders, the entire process becomes suspect.

Although it takes great political courage to challenge the Denver Water Department, Colorado's leaders and media should insist on a fair comparison of all viable options before the Corps dutifully

issues a permit that further solidifies the relentless momentum of Two Forks. With Colorado's current slow growth, we certainly have the *time* to prevent water development paralysis and a disastrous environmental blunder.

Allen Miller is president of Natural Energy Resources Co. in Palmer Lake.

Allen
Miller

Commentary



economy and image are seriously damaged by a major legal and PR battle with almost every national environmental group.

Denver's controversial Two Forks Project is scandalous because several superior alternatives have been purposely omitted from the \$40 million environmental study to protect the 50-year obsession of the Denver Water Department (DWD).

As a result, the Corps of Engineers is about to issue a Two Forks construction permit that will forever destroy a treasured canyon with national environmental significance.

DWD's latest political maneuvering for Two Forks started in the early 1980s, when it succeeded in convincing Gov. Lamm's Water Round Table Committee of the need to dam the South Platte. The Round Table members were mostly prominent, non-engineering water "experts" with a Two Forks bias and little choice but to accept DWD's technical advice. Costs and environmental comparisons of obvious options were never considered. As a result, the ill-advised Round Table group obedi-

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Aurora loses challenge to Arapahoe water plan

By Bill McBean
Denver Post Staff Writer

AURORA — The city has been booted out of court by a judge who says Aurora doesn't have the right to challenge the creation of an Arapahoe County utilities department.

In a ruling received Thursday, District Judge George B. Lee said the city hasn't proven any harm done to its citizens, so it can't proceed with legal action to stop the county from competing with water and sewer services.

At the heart of the issue is which entity will be better able to attract office and industrial development,

which supplies more tax dollars than it uses up in municipal services.

The city contends the county shouldn't build its utility with tax money from residents who live in cities that already have utilities. But Lee's ruling, dated Tuesday and received by the county Thursday, says city residents have no protection against a tax increase that might result from utility start-up costs.

Last week, the county formed the Arapahoe Water and Wastewater Authority. The authority will absorb the Arapahoe Water and Sanitation District, a utility formed

eight years ago by landowners near Centennial Airport.

The county says it doesn't foresee any tax increase. The authority will repay a \$6.5 million loan from the county and eventually the authority will be operated solely with user fees.

County leaders hope the authority will be able to buy 60,000 acre-feet of Gunnison River Basin water. An acre-foot is about 326,000 gallons, or enough to cover one acre at the depth of 1 foot.

That water, however, also is sought by Aurora and is the subject of a bitter dispute between the two. Delta Water Court will decide who gets the water, which is enough to supply about 240,000 people for a year.

County attorneys say Aurora's effort to come up with documents to show wrongdoing by the county has strained relations between the two governments.

Note

A recent Corps of Engineers' computer simulation has confirmed that an average annual diversion of 60,000 acre feet from a large Gunnison reservoir at Union Park can increase the safe annual yield of Metro Denver's existing system by 120,000 acre feet. This yield increase is 20% more than Two Forks, and the cost and environmental damage would be substantially less. Because of this previously unknown multiplier effect, a massive high altitude Union Park Reservoir can provide multi-year drought insurance for both slopes while still meeting Metro Denver's growth requirements. A destructive dam on the South Platte would not be required.

NOV. 25/88

Feds put up \$120,000 toward water study

by Laura Anderson

Results on the first phase of the Upper Gunnison/Uncompahgre Basin water study aren't even finalized yet, but the U.S. 1989 budget contains \$120,000 toward phase two of the study to go to the Bureau of Reclamation.

According to Brent Eulenberg, planning coordinator for the Bureau of Reclamation in Grand Junction, the Bureau would not contribute that money toward phase two unless the State agrees to fund 60%. And he says that the State probably would not contribute that 60%, which works out to \$180,000 this year, "unless plans for transmountain diversion are accepted by the advisory committee and the study participants."

Profits from selling Gunnison County water to the Front Range could be used to fund projects in the Basin which the study recommends. The cost of doing the study would also be paid back out of any water projects built. If the county does not want moneymaking projects, the State might not want to keep putting up money, since its prospects for repayment would be small.

According to Eulenberg, the purpose of the study is to examine present water demand in the basin and to look at future growth scenarios. Options could include things from plans for reservoirs to improving wildlife habitat along rivers. However, the description of the study given to the federal government seems to assume a transmountain diversion component. It reads, "the purpose of the investigations would be to determine the most efficient use of Gunnison River Basin waters for its citizens and the citizens of the State of

Colorado. The Gunnison River Basin has significant and valuable water resources with substantial storage held in trust by Reclamation in the Wayne N. Aspinall Unit reservoirs. A combining of east slope consumptive needs with the west slope environmental and recreational needs provides a unique opportunity for the State to distribute capital to achieve balanced economic development among historically competing interests."

While phase one looked at depletion from irrigation, municipal and industrial uses of water in the Gunnison and Uncompahgre basins, phase two would look at models of possible diversions. It would also look at return flows - how much water comes back into a stream, for example, after it flows over a rancher's field for irrigation purposes.

Phase one began in March, 1987, and cost \$550,000, with approximately \$80,000 coming from the Bureau of Reclamation, \$30,000 coming from the local water districts, and the bulk funded by the Colorado Water Resource and Power Development Authority, a State agency. Phase two is scheduled for 1989 to 1992.

A phase three is also possible. The Bureau of Reclamation estimated that the total cost of a three phase study would be \$2,300,000.

November 28, 1988
P.O. Box 567
Palmer Lake, CO. 80133
(719) 481-2003

Appointed Legislators, HJR 1001, and
Colorado Water Conservation Board
1313 Sherman Street, Suite 721
Denver, Colorado 80203

RE: Public Comment, HJR 1001 Water Policy Meeting, Nov.28, 1988

Gentlemen:

The opportunity to give public comment before your water policy group is appreciated.

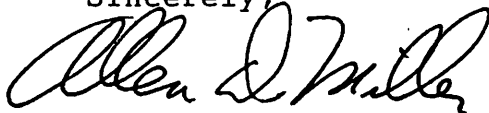
The damaging Two Forks Dam proposal is potentially the most important and devisive water policy issue in Colorado's history. This is why Governor Romer has challenged Colorado's residents and Legislature "to find an alternative solution". Your current HJR 1001 Water Policy effort was also initiated largely in response to this Two Forks controversy.

Several superior, but overlooked alternatives could readily supply Metro Denver's future water without damaging Colorado's environment and dividing its people. However, your HJR 1001 agenda is completely side stepping this politically sensitive alternatives issue.

Instead of dodging this critical issue, suggest your study agenda be changed to include state funding of a 90 day comparison of Two Forks with the "overlooked" alternatives. The three most obvious alternatives are currently being actively pursued by Metro Denver's largest public entities. Most of the preliminary data for such a comparison is already available. The investigation should be conducted by a highly reputable water consulting firm that is completely free from the political pressures of the Colorado water scene. A Joint Legislative Resolution should also ask that federal permitting of Two Forks be withheld until the reasonable options are properly evaluated.

The following statement for the public record, titled **Two Forks Expose'**, provides ample justification for legislative inquiry into the Two Forks alternatives.

Sincerely,

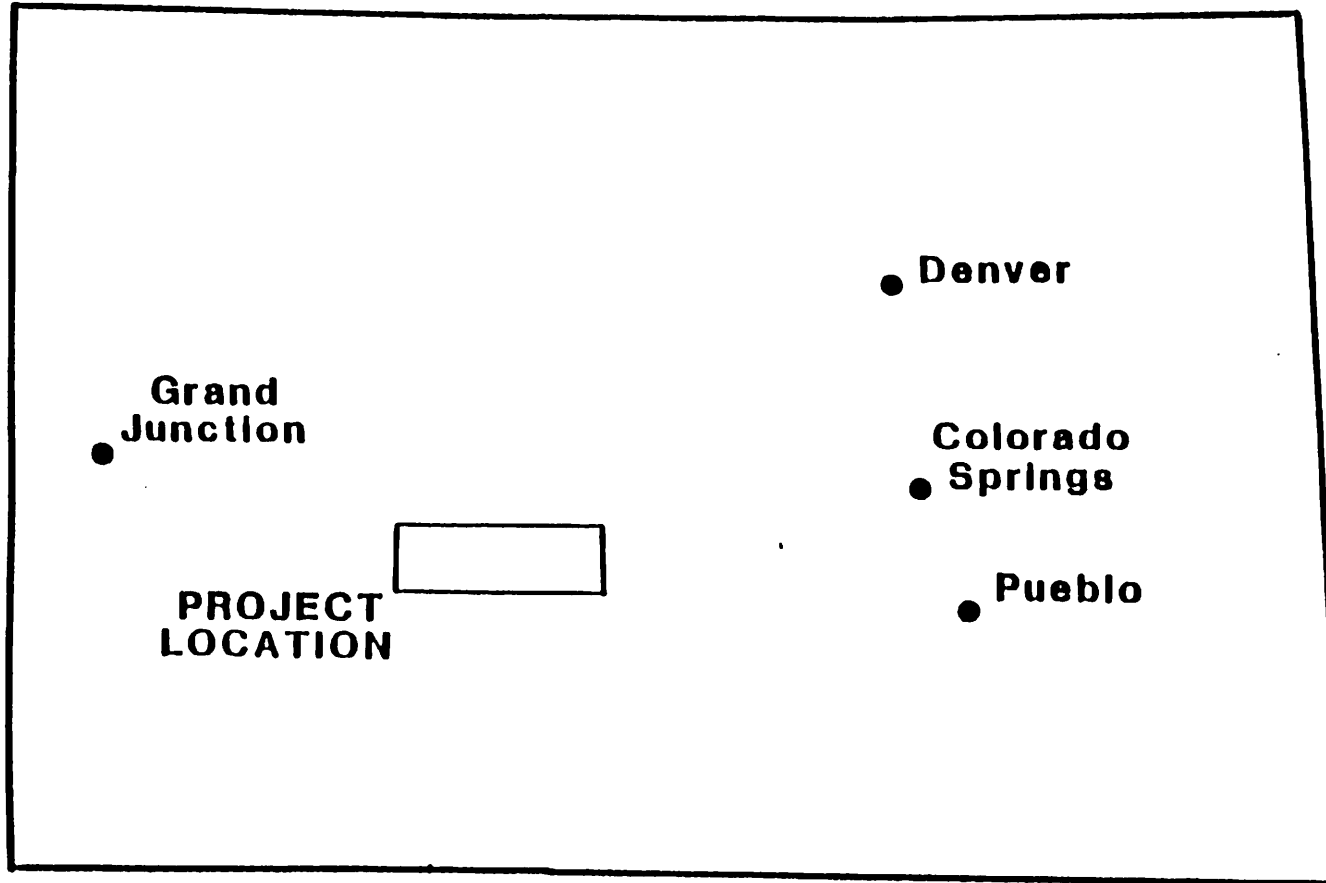


Allen D. (Dave) Miller

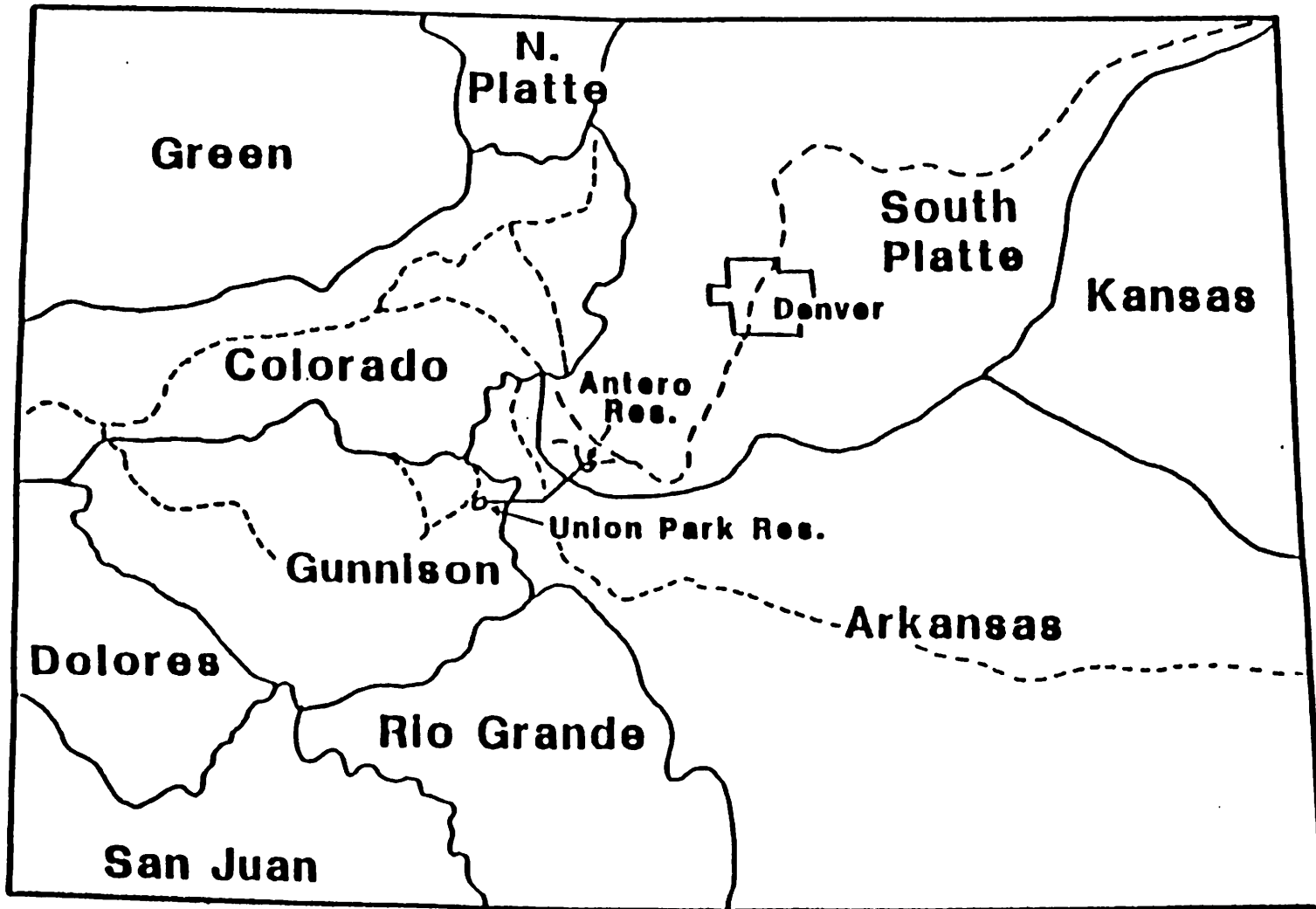
ADM/bm

Encl: **Two Forks Expose'** statement dated November 11, 1988

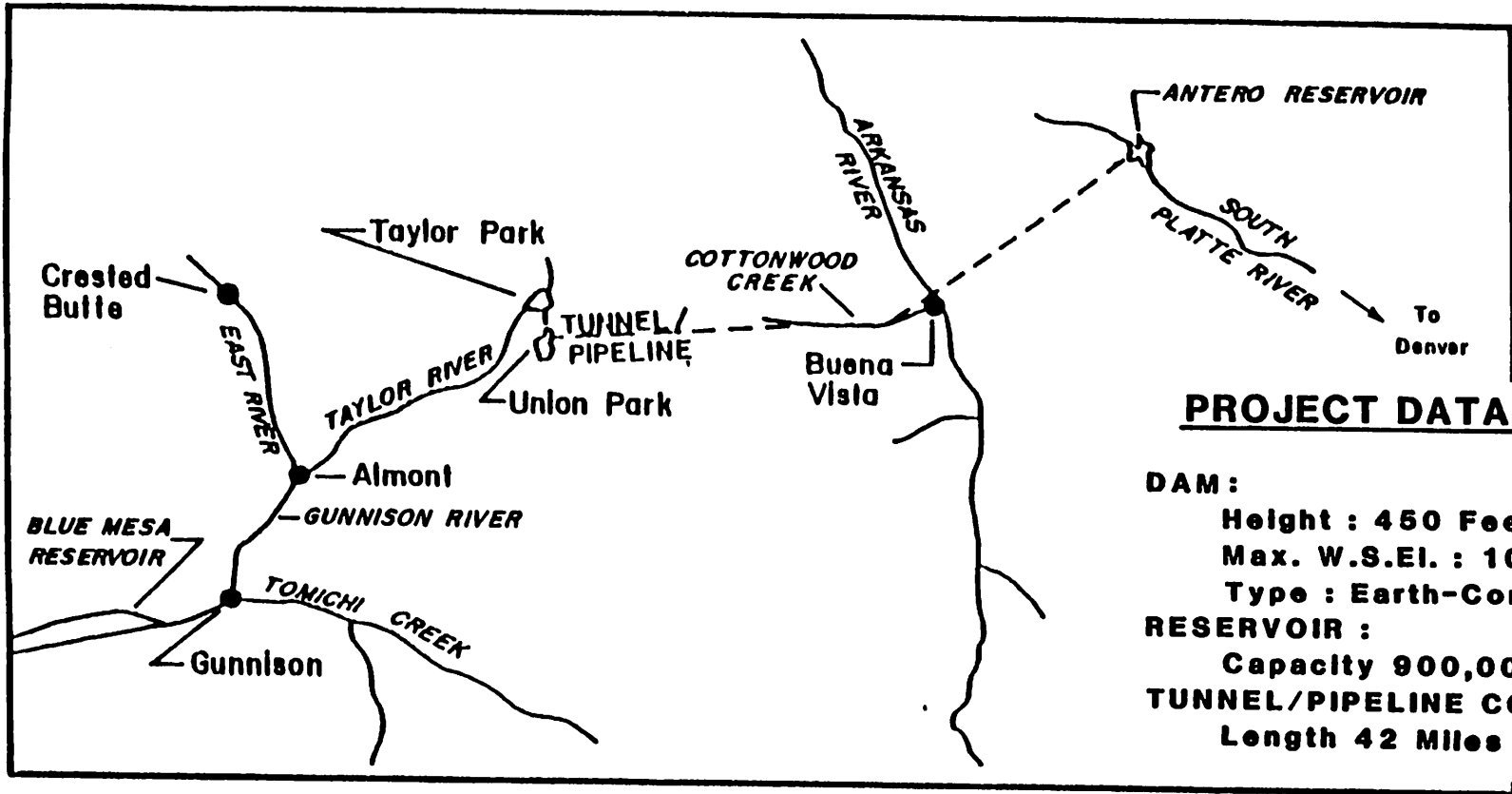
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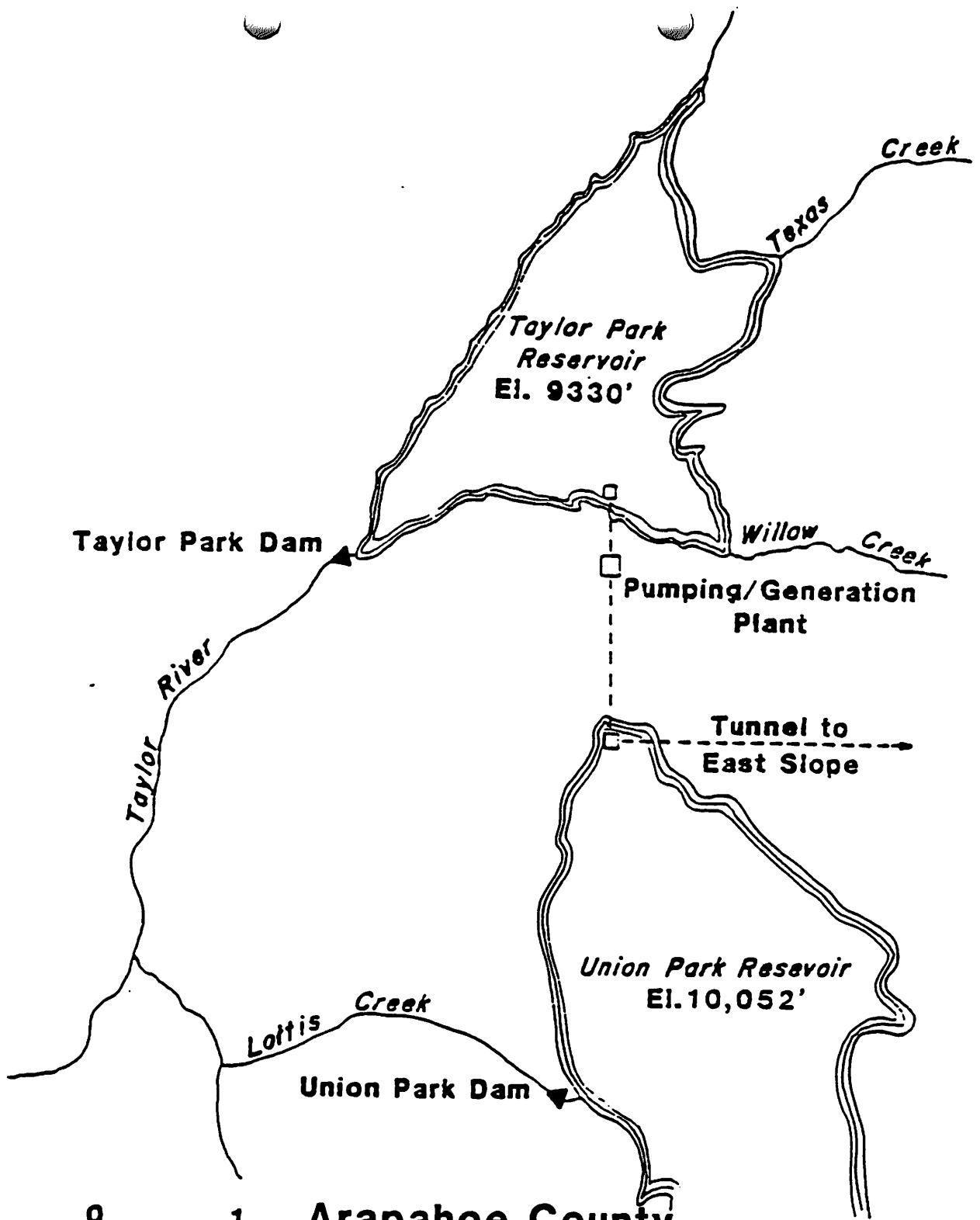
Arapahoe County Proposed Union Park Water Supply Project



**Arapahoe County Proposed
Union Park Water Supply Project**



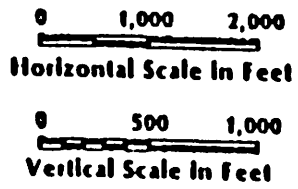
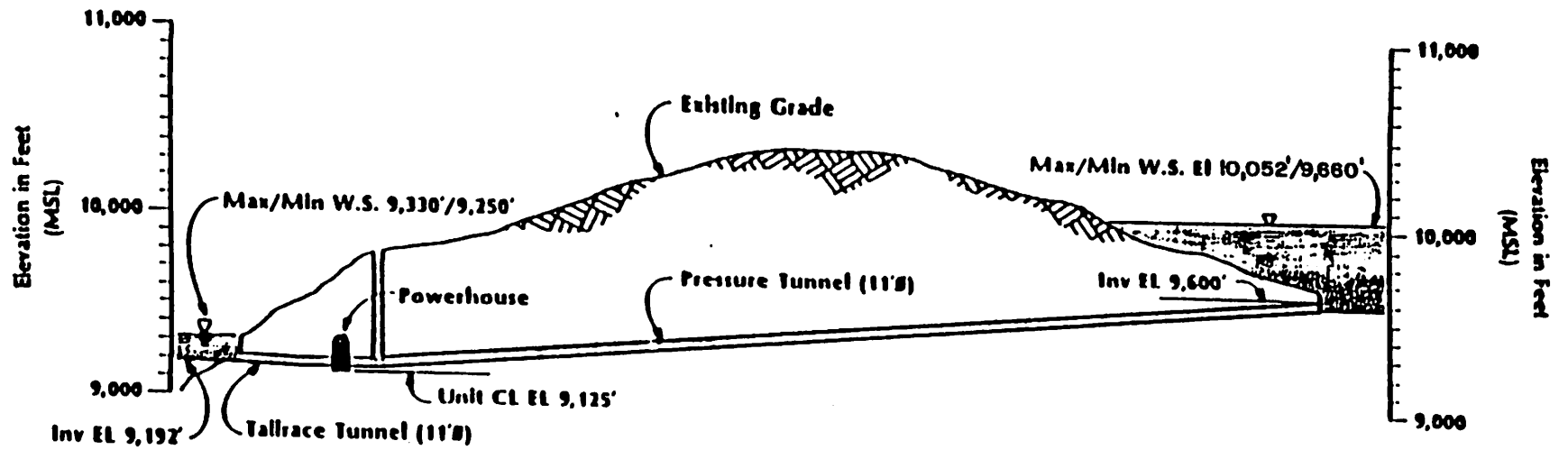
Arapahoe County Proposed Union Park Water Supply Project



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Proposed**

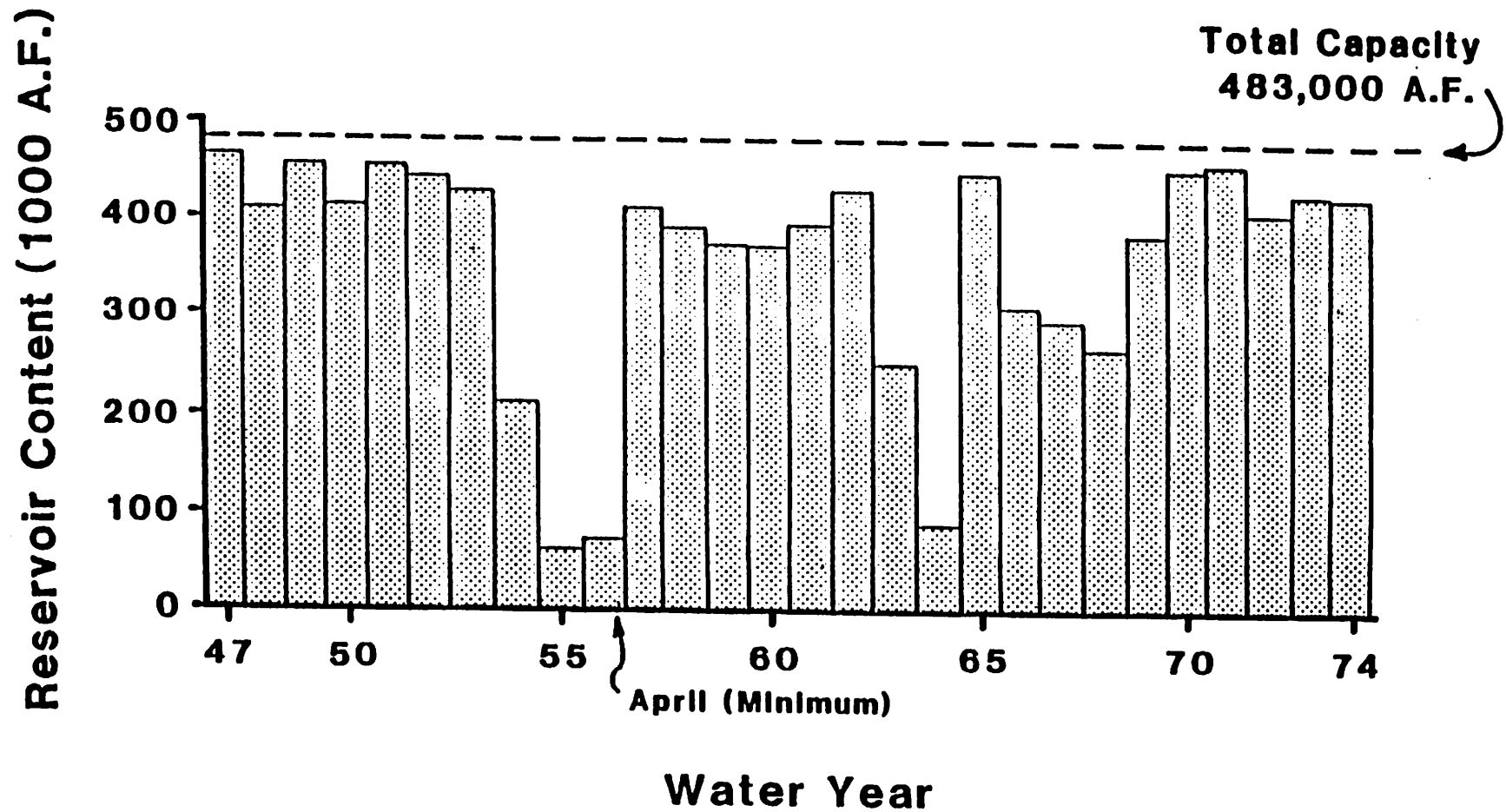
**UNION PARK
WATER SUPPLY PROJECT.**



**Arapahoe County
Proposed
UNION PARK
WATER RESOURCE PROJECT**

Arapahoe County Proposed Union Park Water Supply Project

Denver Water Department Modeled Reservoir Contents



Arapahoe County Proposed Union Park Water Supply Project

Water Yield for Denver Water Dept. & State of Colorado

Min. Stream Flow at Taylor Park Dam Cubic Feet Per Second		Avg. Diversion to Union Park Acre-Feet Per Year	Increase in DWD Safe Annual Yield Acre-Feet Per Year
<u>Summer</u>	<u>Winter</u>		
200	50	60,000	120,000
150	50	80,000	140,000
100	50	100,000	160,000*

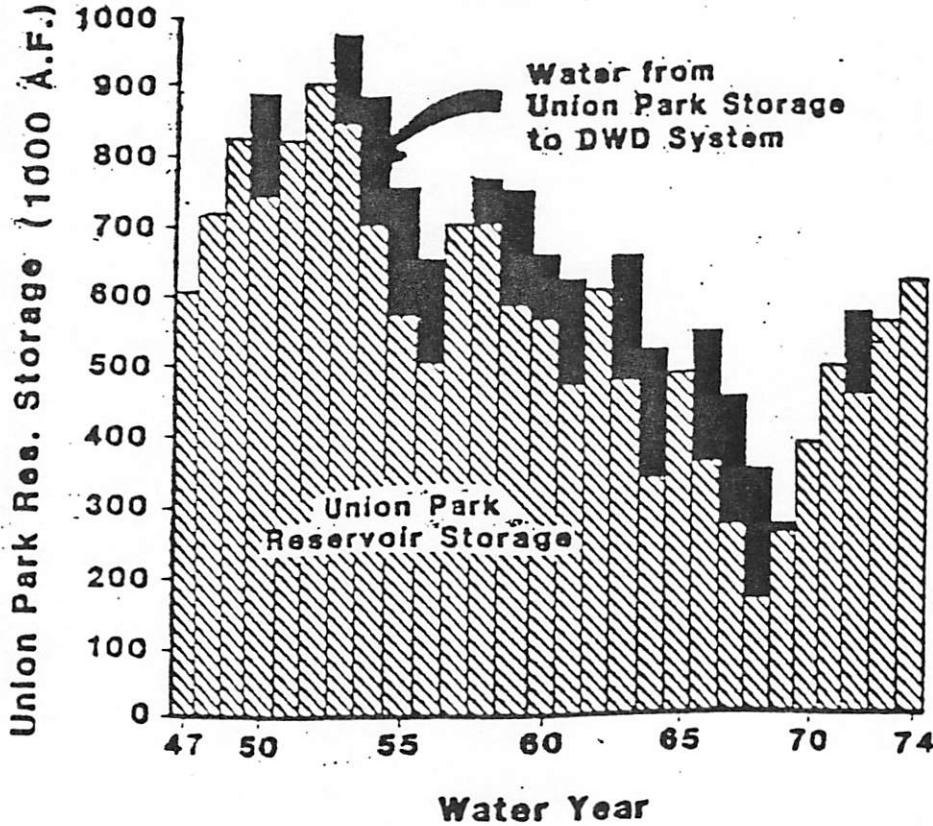
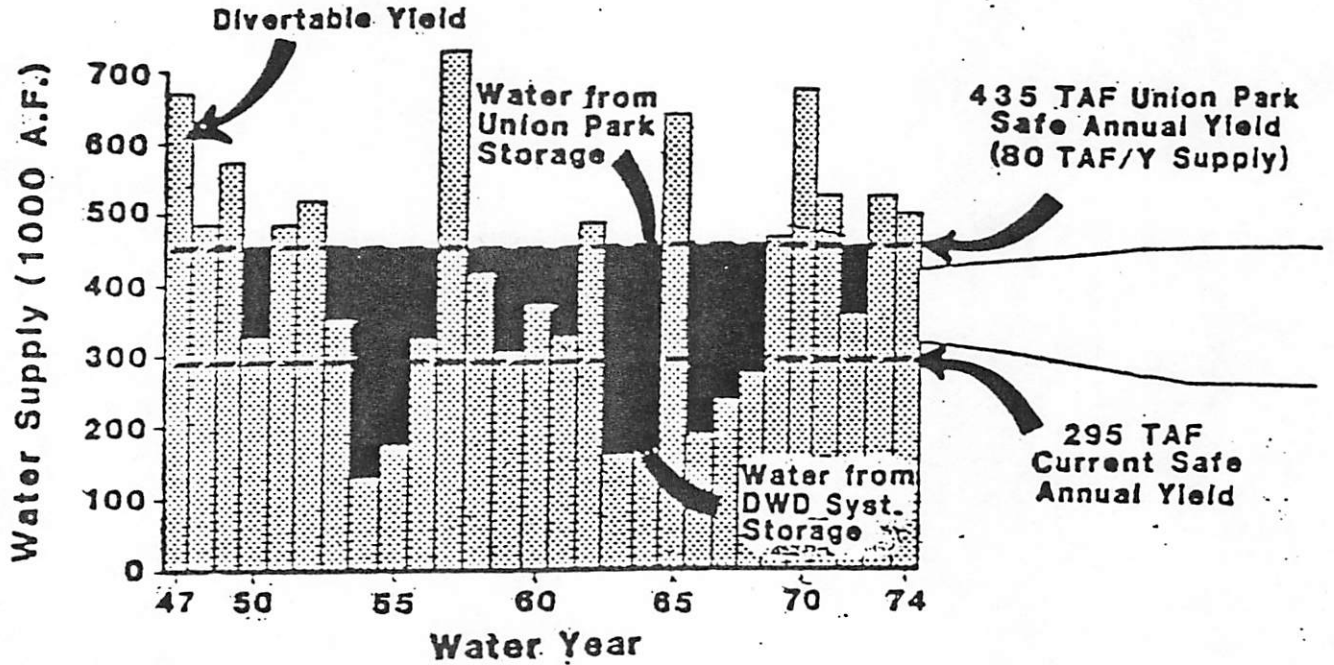
* or 20,000 Acre-Feet for Dry Year Releases
from Colorado Conservation Pool to Gunnison,
S. Platte & Arkansas Rivers

Union Park Water Supply Project

Denver Water Department

Divertable Yields & Safe Annual Yields

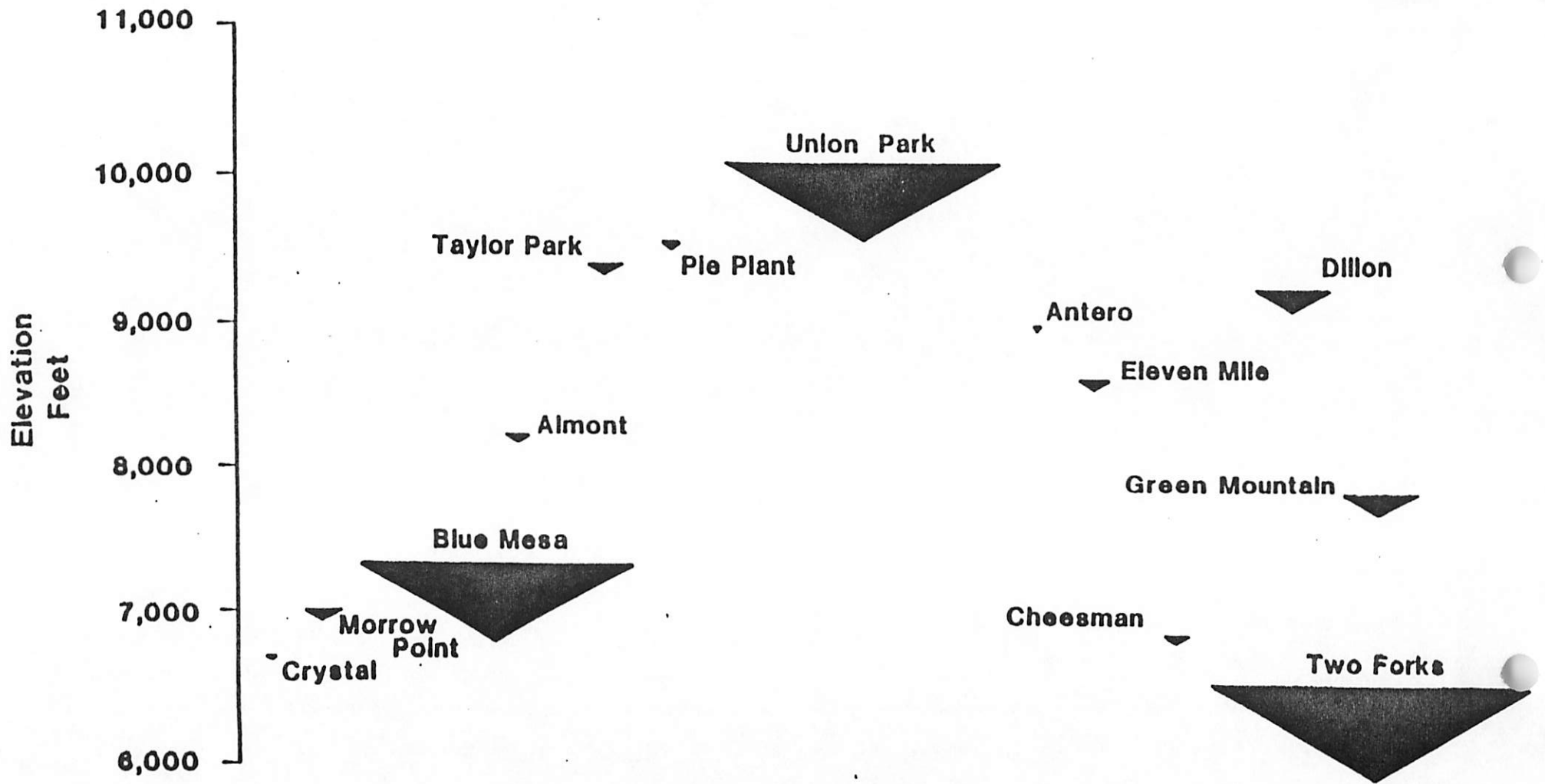
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Arapahoe County Proposed Union Park Water Supply Project

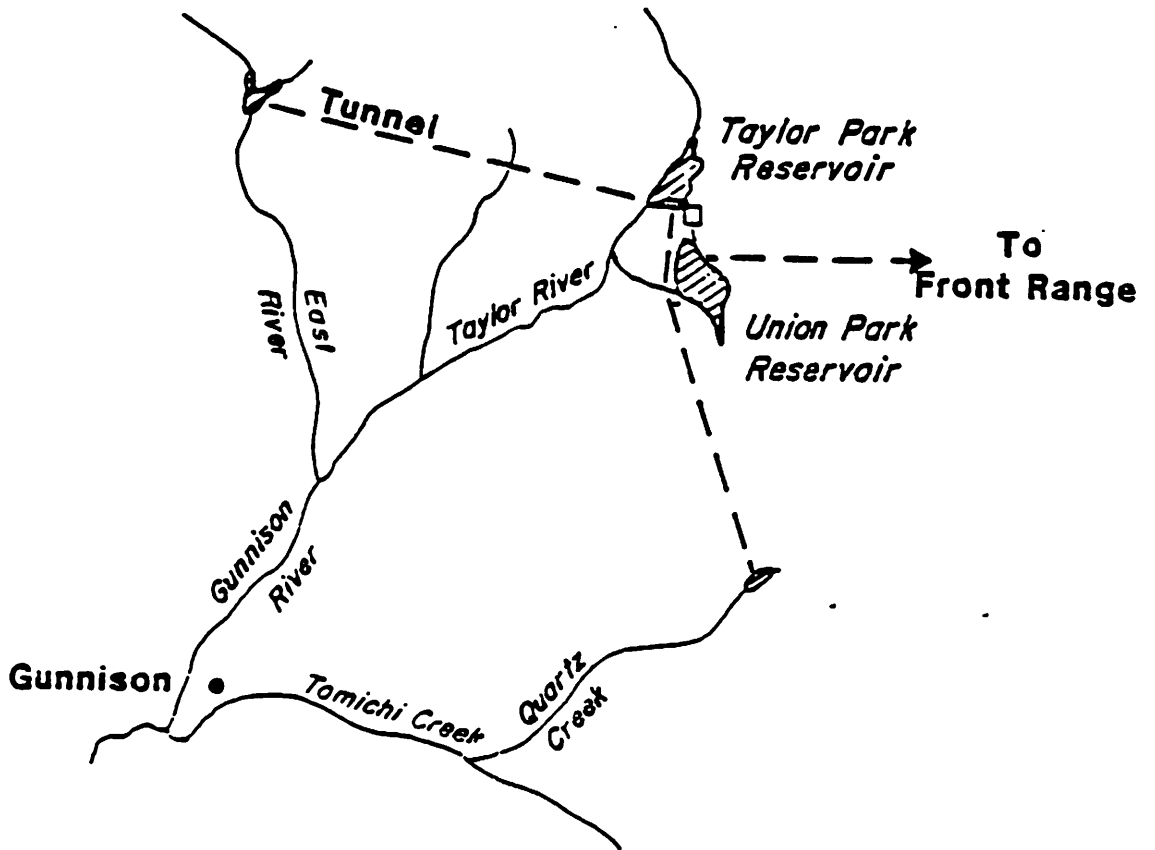
System Comparison with Collegiate Range Project

	<u>Union Park</u>	<u>Collegiate Range</u>
Capital Cost	\$481 M	\$650 M ±
Safe Annual Yield Increase	140,000 AC-FT	73,000 AC-FT
Capital Cost / Acre-Foot	\$3,450	\$8,900
Annualized Cost / Acre-Foot	<i>at 20y, 6% = 500.78</i> \$305	<i>20y, 6% = 775.94</i> \$750
Future Expansion	150,000 AC-FT	None Planned
Expan. Annualized Cost / Acre-Foot	\$400-\$500	N.A.
Environmental Impact	Enhances Gunnison, Arkansas, S. Platte & Upper Colorado	Damages Almont, Increases Platte High Flows



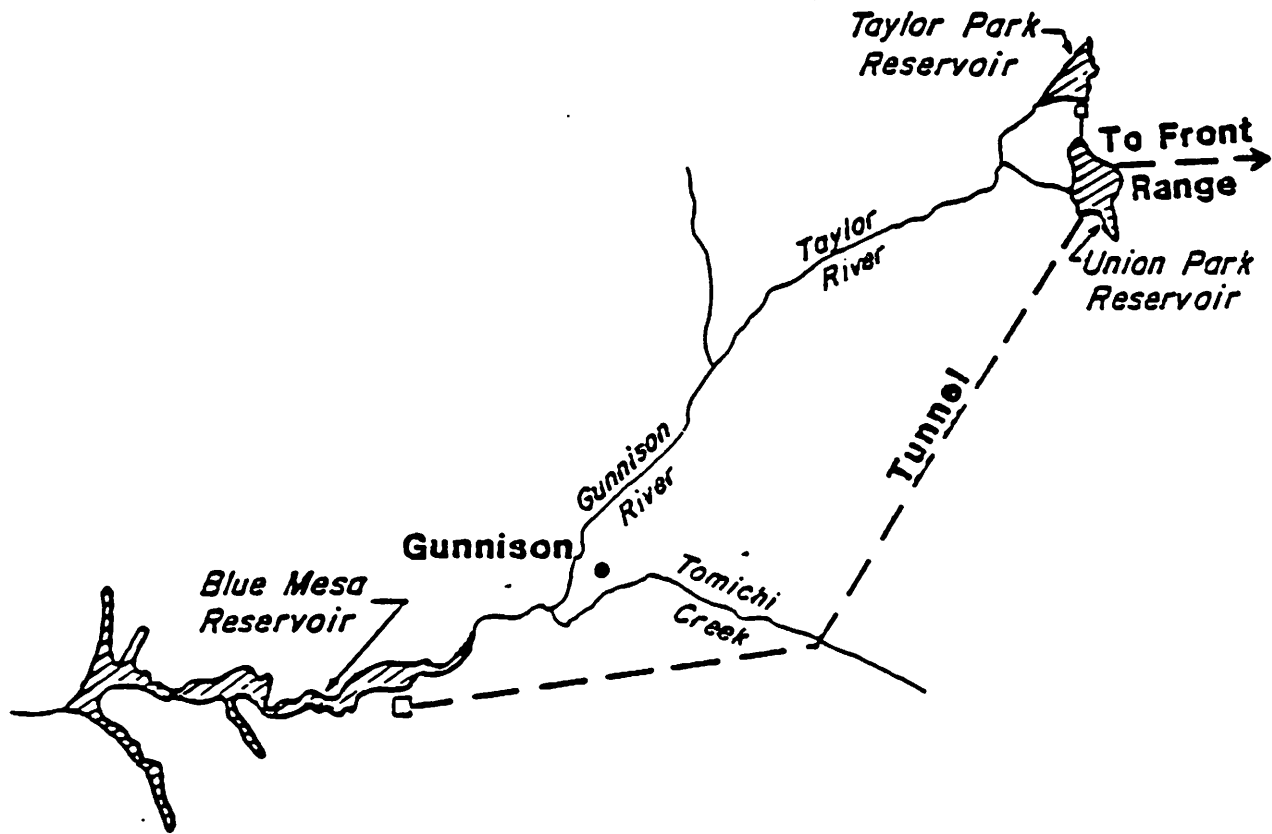
Colorado Water Storage Reservoirs

Gunnison Basin Collection System To Union Park Reservoir



Water Yield	54,000 AF (Est.)
Construction Cost	\$290 M
Equivalent Pumping Cost	\$9 M
Cost Per Acre - Foot	\$5,500

Blue Mesa Pump Back To Union Park Reservoir



Water Yield

150,000 AF (Est.)

Construction Cost

\$690 M

Equivalent Pumping Cost

\$170 M

Cost Per Acre-Foot

\$5,700

**PROPOSED
ARAPAHOE COUNTY
UNION PARK WATER SUPPLY PROJECT
(ADVANTAGE OVER COLLEGIATE RANGE PROJECT)**

1. ABILITY TO MEET THE MINIMUM STREAMFLOW REQUIREMENTS WITHOUT DRYING UP TAYLOR RIVER REACH UPSTREAM OF ALMONT TO TAYLOR PARK RESERVOIR.
2. DOES NOT REQUIRE REPLACEMENT RESERVOIR ON EAST RIVER AND THUS PROTECT THE FISH HATCHERY.
3. DOES NOT REQUIRE MAJOR STORAGE FACILITY ON THE EASTERN SIDE OF THE CONTINENTAL DIVIDE FOR REGULATION PURPOSES.
4. HAS REDUCED ENVIRONMENTAL IMPACTS (ONE RESERVOIR SITE).
5. ABILITY TO DELIVER STORED WATER TO GUNNISON, ARKANSAS, AND SOUTH PLATTE WATERSHEDS.
6. ITS COMMAND OF HIGHER ELEVATION CAN ENHANCE THE YIELD OF DENVER'S EXISTING WATER SUPPLY SYSTEM.
7. ENHANCEMENT OF RECREATIONAL OPPORTUNITIES IN THE GUNNISON RIVER BASIN.

COLORADO'S

UNION PARK WATER SUPPLY PROJECT

Governor Romer has challenged Colorado and its leaders to find an alternative future water supply for Metro Denver that will save the South Platte Canyon. The Upper Gunnison's overlooked Union Park site is probably the best natural reservoir location in Colorado -- if not the country. The following is a brief summary of the reasons why the Union Park Water Supply Project is the superior water alternative for Colorado's future growth on both slopes:

1. Altitude Advantage The proposed Union Park Reservoir can hold up to 1.1 million acre feet of water at 10,000 feet altitude on the Gunnison side of the Continental Divide. This off river location, with an ideal dam site, is a perfect fit with the basic engineering maxim that water should be stored as high as possible to maximize the multiple benefits for down river users. P

2. Largest Untapped Water Source Colorado is entitled to about a million acre feet of Gunnison water that is currently being unused and lost to the down river states. Bureau of Reclamation and other studies indicate there is as much as 600,000 acre-feet of surplus Upper Gunnison Basin water that could be used for East and West Slope growth. The Metro Denver Water Supply EIS is fatally flawed because it did not seriously consider this viable Gunnison alternative from Colorado's largest untapped water source.

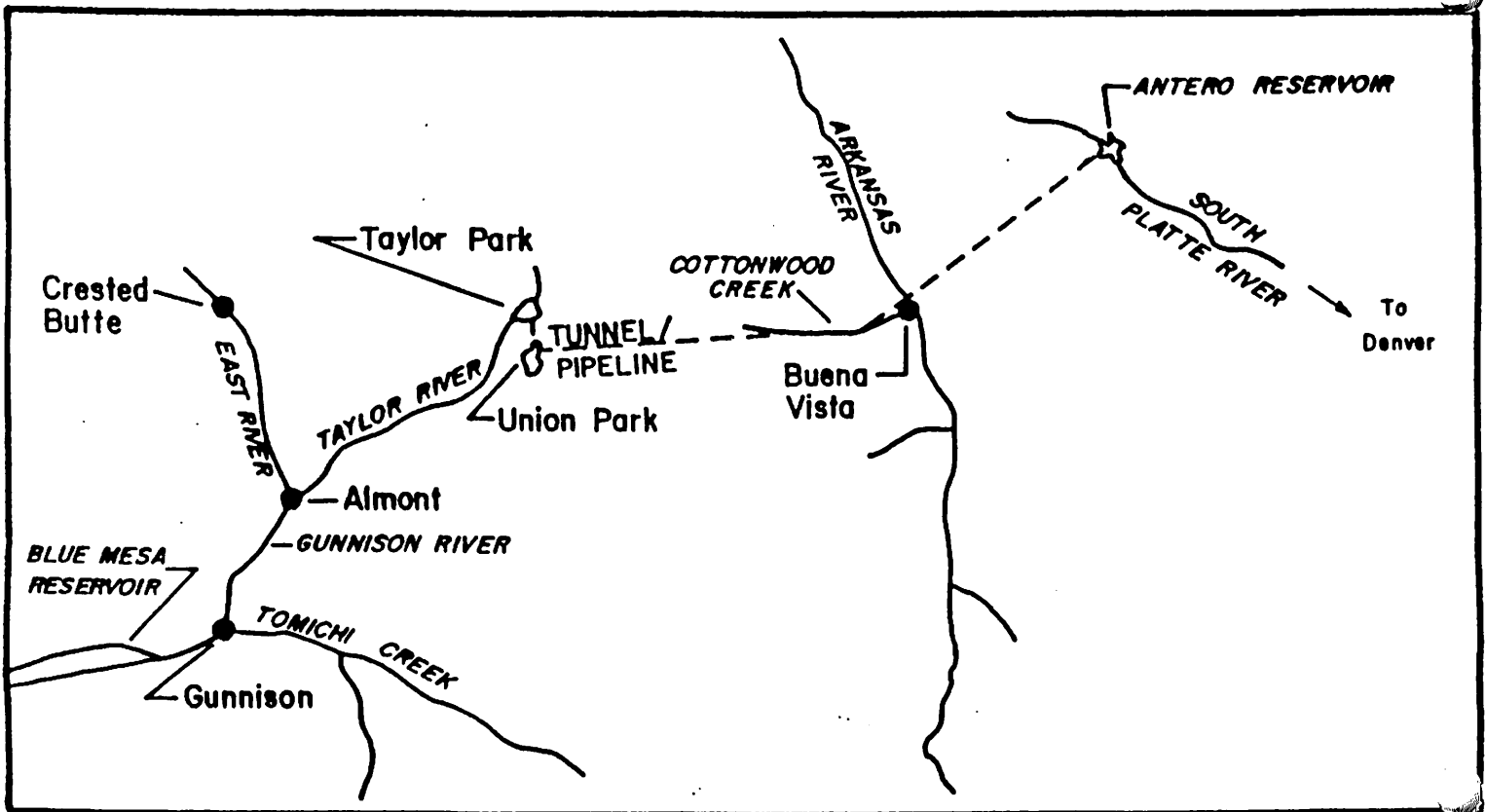
3. Environmental Enhancement By pumping surplus Gunnison flood waters into Union Park with high tech reversible pump-generators, these waters can be released by simple gravity siphon and conduits to the Gunnison, South Platte, and Arkansas rivers in the critical drought periods when the fragile ecosystems are endangered. The threatened Upper Colorado River tributaries and tourist areas can also be saved from Denver's future plans to further dewater this important area that currently has 19 diversions to the East Slope. With Union Park, the population growth needs of both slopes can be met as an adjunct to Union Park's unique capability to enhance Colorado's four major river environments. P.

4. Economic Efficiency Using the same estimating criteria as the Metro Denver EIS, major international engineering firms have confirmed that Union Park can increase Metro Denver's safe water yield 40% more than Two Forks for 60% of the cost per unit of yield. Union Park can also double the yield of Aurora's proposed Collegiate Range diversion from the Gunnison for less than half the cost. The surprising efficiency of Union Park for Metro Denver has been largely confirmed by Corps of Engineers' computer analysis. By collecting and holding large volumes of water in high altitude storage for release only in cyclic drought periods, Union park can increase the operating efficiency of Denver's existing reservoirs so they can capture more of the Upper Colorado and South Platte flood waters that are currently spilled in wet periods. Computer modeling shows that an average annual diversion of only 80,000 acre 2 feet explains P

feet from Union Park can increase the safe annual yield of Denver's system by 140,000 acre feet. Evaporation losses from the high altitude Union Park Reservoir would be only one-fourth the amount lost from the low altitude Two Forks concept. Union Park's highly flexible and responsive 42 mile siphon to the South Platte can move 1000 acre feet per day to Denver when it is needed in dry periods without the need for additional storage and/or regulating reservoirs on the East Slope.

5. Unifying Influence Although Colorado has large volumes of renewable water for future growth, outmoded concepts, inadequate planning, and East vs. West Slope conflicts have inhibited an objective approach to the state's water development. Since Union Park has major economic and environmental advantages for both slopes, it can help create a spirit of cooperation and a climate where new water ideas can receive objective consideration based on their merit. Governor Romer's wise call for a fresh look at alternatives is both courageous and timely.

For more information on Colorado's Union Park Water Supply Project, contact Dave Miller, Natural Energy Resources Company, P.O. Box 567, Palmer Lake, CO. 80133, (719) 481-2003.



Union Park Water Supply Project

THE DENVER POST

A Times Mirror
Newspaper

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Anthony H. Campbell, *Managing Editor*

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Sue F. Smith, *Associate Editor*

William H. Hornby, *Senior Editor*

Drying up the Upper Colorado

METROPOLITAN Denver already has taken 24 percent of the total historic water flow from Colorado's Blue, Fraser and Williams Fork rivers, and the controversial Two Forks project is destined to take another 17 percent. Homestake II's impact on the Eagle River and the planned future expansions of both projects will only worsen a very serious environmental problem for these Upper Colorado River tributaries.

Ironically, because of Denver Water Department and Metro Water Providers policies, the Denver area continues to seriously degrade its best recreational river environments on both slopes. There are already nine water-diversion tunnels from the Upper Colorado River Basin to the East Slope.

Meanwhile, the neighboring Upper Gunnison Basin is just as accessible and even wetter. But this basin remains untouched by any transmountain diversions. A recent detailed study by a major engineering company confirms old Bureau of Reclamation studies that a large Upper Gunnison reservoir is a more cost-effective, environmentally sound water source for the Eastern Slope and Denver. The Corps of Engineers agrees that one acre-foot of dry-year supply from Gunnison can increase the safe yield of Denver's existing reservoirs by two acre-feet.

Yet, this obvious source was completely ignored in the five-year Metro Denver Water Supply Draft EIS study that recently identified Two Forks and the same Upper Colorado tributaries as the best water alternative for Denver area growth.

This gross imbalance in the strategic use of our state's critical water resources would never happen in any other Western state. Colorado is, unfortunately, the only Western state without written policy guidelines for water development. Instead, our executive, legislative and judicial branches struggle with the 100-year-old prior appropriation doctrine as our only policy guideline. No wonder 70 percent of the nation's water attorneys practice in Colorado.

by ALLEN D.
MILLER

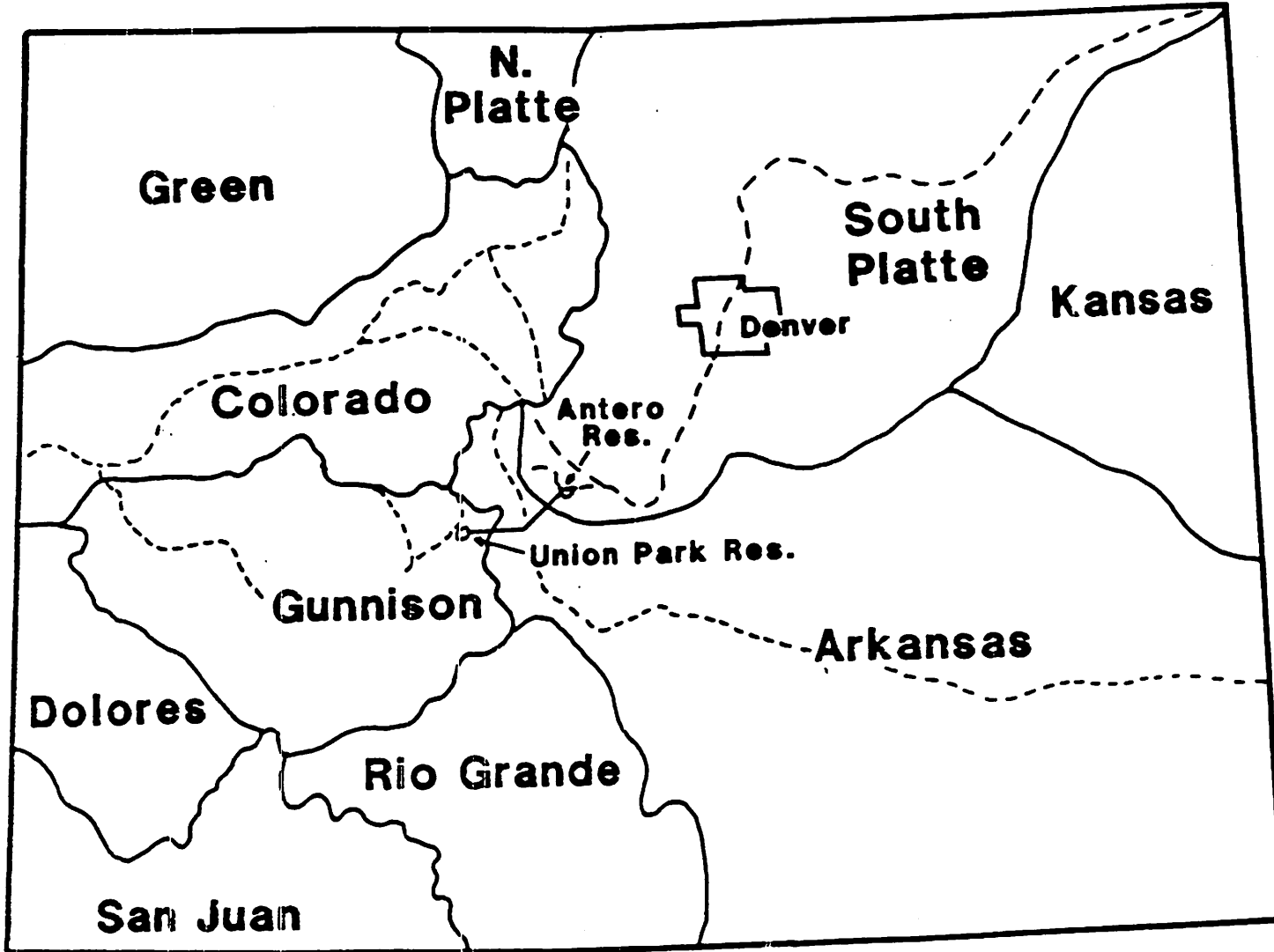
Our people are the ultimate losers, with high-cost water systems and a climate where myopic water departments can exploit the state's water policy vacuum — regardless of environmental impact. The water attorneys naturally resist any change to Colorado's ancient water doctrine.

Two Forks is the largest and most controversial water project ever proposed for Colorado. The state's Water and Power Authority, Water Conservation Board and Department of Natural Resources are all charged with managing our water resources. Curiously, none of these state agencies has evaluated or even commented on the overall impact of Two Forks on the state's water resources environment. In spite of the obvious shortcomings of Two Forks, no one in state government seems willing to challenge the 20-year dream of the Denver Water Department.

In view of this critical situation and the imminent decisions on Two Forks, Homestake II, Rock Creek, Straight Creek and other Upper Colorado diversions, I suggest adoption of an emergency state water policy and legislation that prohibits any further dewatering of the Upper Colorado River headwaters.

This emergency action should remain in effect until other water sources, including the Upper Gunnison, are thoroughly evaluated within the context of an overall state water resource policy. If emergency steps are not taken now, the state's water die will soon be cast for the next 50 years.

Allen D. Miller is president of Natural Energy Resource Campaign in Palmer Lake



Union Park Water Supply Project

NATURAL ENERGY RESOURCES COMPANY

July 15, 1987

Colonel Steven G. West
Planning Division
Omaha District, Corps of Engineers
Omaha, Nebraska 68102-4978

Subject: Metro Denver Water Supply From The Gunnison Basin

Dear Colonel West:

Attached for your consideration are excerpts from various Bureau of Reclamation studies conducted from the 1930's to 1950's that demonstrate the long range transmountain water supply potential of the Gunnison Basin for the East Slope. These studies are well known to the Colorado water community as the Gunnison Arkansas Project (GUNARK), and they envision as much as 650,000 acre feet of transmountain water per year from the Gunnison.

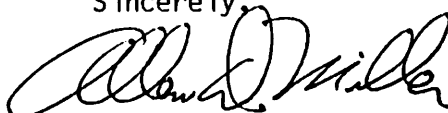
Also attached is a well known 1972 Central Colorado Water Conservancy District study of the Central Colorado Project that shows the potential for diverting up to 600,000 acre feet from the Gunnison to the South Platte River and Metro Denver. Although these GUNARK and Central Colorado studies were premature of need, they clearly demonstrate the Gunnison Basin has long been considered a viable water source for the East Slope growth.

In addition, Natural Energy's (NECO) Union Park Water Supply Project and Aurora's Collegiate Range Project have been publicly known since late 1985 and mid 1986 respectively. Both of these ongoing alternative projects plan to divert surplus Gunnison water to Metro Denver at an economic and environmental cost of safe yield that is considerably less than for the proposed Two Forks Project. You already have Aurora's description of Collegiate Range, which could be constructed before the Two Forks 1995 completion date. A description of Union Park was initially sent to your office April 22, 1986. You have also had our engineering company's detailed Union Park Reconnaissance Evaluation Study since October 1986. We have since updated this study for your EIS evaluation to show the substantial economic and environmental advantages of the site-specific Union Park alternative over the proposed Two Forks Project. Two Forks further depletes the same Upper Colorado River tributaries that are already being seriously dewatered by Metro Denver. Union Park could also be in use before 1995.

Since the Upper Gunnison Basin has always been a viable water source for Metro Denver, and since this supply was not considered in the EIS as a reasonable alternative as required by the National Environmental Protection Act, NECO again urgently recommends a Supplemental Draft EIS. As a minimum, this Supplemental Draft should directly compare the economic and environmental factors associated with Two Forks, Union Park, Collegiate Range, Thornton's Recycling Project, and recent conversions of agricultural water. This evaluation should also address the critical need for a balanced use of Colorado's natural water resources, instead of an unnecessary dewatering of one basin.

If the known viable alternatives are not adequately considered in a Supplemental Draft, Metro Denver's future water supply will undoubtedly continue to be a victim of widespread controversy, legal battles, and delay. On the other hand, the Corps can provide a great service to Colorado and Denver by fairly considering all reasonable alternatives. If this is done, the various interest groups can then rally with confidence around the optimum solution(s) available. When the best water sources and structural systems are clearly identified, institutional matters such as permitting, water rights, exchange agreements, financing, etc. will quickly fall into place.

Sincerely,



Allen D. (Dave) Miller
President

ADM/bjm

cc: Governor Romer, Denver Water Department, Metro Water Providers, EPA, & others.

- Atchs. 1. BOR Study Excerpts
2. Central Colorado Project Study

NOTE:
IN A NECO MEETING
WITH THE CORPS IN
OMAHA JULY 16, 1987,
COL. WEST ADVISED HE
WILL MAKE A "SUPPLEMENTAL
DRAFT" DECISION BY
THE END OF JULY.
ADM

NATURAL ENERGY RESOURCES COMPANY

July 2, 1987

Mr. Robert L. Tonsing
Water For Metro Denver
1360 Clarkson Street, Suite 300
Denver, CO. 80210

Subject: Two Forks Alternatives

Dear Mr. Tonsing:

Your letter of June 29, 1987 may have a point. It probably would have been more accurate to say in our June 24, 1987 letter to Governor Romer that Two Forks is the "most expensive and environmentally damaging" instead of "largest and most controversial" water project in Colorado's history.

Unfortunately, you, the Denver Water Department, and many other proponents of Two Forks refuse to address the basic issues repeatedly raised in our numerous letters. i.e.

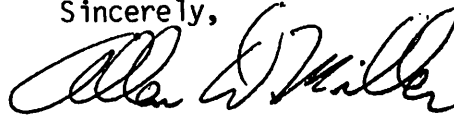
1. The Upper Gunnison water source was not considered in the Draft EIS as a reasonable alternative for Metro Denver as required by the National Environmental Protection Act (NEPA).
2. Thornton's concept to recycle agricultural water, and Aurora's and Colorado Springs' ongoing purchases of ditch water are viable alternatives that have also been ignored in the Draft EIS.
3. Two Forks and its expansion projects will further seriously deplete the same Upper Colorado River tributaries that have already been hard hit by transmountain diversions. Denver continues to degrade its nearest mountain "playgrounds" on both slopes.
4. Detailed engineering analysis shows water releases during drought periods from Union Park Reservoir in the Upper Gunnison would be substantially more cost effective for Denver and less damaging to Colorado's environment than Two Forks.
5. Confirmation of Union Park's superior cost, yield, and environmental data in the EIS could quickly create a popular and institutional consensus facilitating construction earlier than Two Forks.
6. Water diversion from the virgin Upper Gunnison would help correct a gross environmental imbalance in the use of Colorado's natural water resources. Colorado's four largest river ecosystems can be enhanced during droughts with a major reservoir on the Continental Divide.

Each one of these fundamental points represents a potential fatal legal flaw in the entire Metro Denver EIS effort, unless addressed and corrected in a Supplemental Draft for public review as required by NEPA. (Our engineers will be in Omaha July 16, 1987 to assist in the Corps of Engineers' evaluation of Union Park)

As head of Water For Metro Denver one would think your prime interest would be the development of the best water supply alternatives for the people. However, you seem more concerned about our possible reward for a fresh concept, than having an honest evaluation of legitimate alternatives. If Union Park is fairly compared with the other alternatives, neither of us should fear the consequences. To do otherwise would be a complete distortion of the EIS concept, and our motives become suspect.

We surely respect the wisdom of Colorado's senior water community members. However, we also believe this great state has room for some new thinking in the water resource arena. Suggest we encourage fair comparisons of our competing ideas with good spirit, more light, and less emotion. Colorado's people will be the ultimate winner.

Sincerely,



Allen D. (Dave) Miller
President

ADM/bm

cc: Governor Romer, Legislators, and others

Colorado Springs

CITY
REGION
STATE

NEWS

FRIDAY, JULY 17, 1987

GAZETTE TELEGRAPH

Deal to sell water angers Summit County officials

Associated Press

SILVERTHORNE — Summit County officials and a Sierra Club representative have lambasted the Colorado River Water Conservation District for giving water to Denver and ending up with "30 pieces of silver in their pockets."

A recent out-of-court settlement with the Denver Water Board, which will allow Denver to divert more Western Slope water but will provide for compensation for it, came under fire at a river district board meeting in Silverthorne.

The settlement has been controversial since it was reached last December.

Dillon Mayor Flo Raitano said the river

district's failure to get feedback from local governments first was "inexcusable," and the settlement could damage summer recreation and the county economy by ruining the Blue River.

She said the Green Mountain Pumpback would load Dillon Reservoir with phosphorus and "totally eradicate the summer economy."

Dillon derives much of its summer revenue from people who use the reservoir for sailing, fishing and picnicking.

"If it's a green slime pond, that won't happen. It's nice you're going to get all this money to put into the kitty, but at whose expense?" she asked the board.

Bill Needham, Grand County's member on the river board, said the district plans to use much of the proceeds from the proposed Rock Creek reservoir to help solve problems in Fraser River Valley, the area to be affected. He said the river district probably could pledge some money to offset effects on Summit County as well.

Silverthorne Mayor Jack Archibald said he is concerned that diverting more water above Dillon Dam could lessen water flows in the Blue River below the dam. He also said the pumpback running through the center of Silverthorne will create aesthetic problems.

NECO will soon send the Corps
DATA showing how Union Park's
high quality water CAN help
dilute heavy metals and phosphates
in PLATTE & Blue River WATERS.

Two Forks and other planned
diversions from Upper Colorado
tributaries should soon become
A MAJOR INSTITUTIONAL problem
between Metro Denver, CRWCD,
and local Upper Colorado governments.

ADAM

4-89
JUDY CLARK
519 E. GEORGIA
GUNNISON CO 81230

The Gunnison Cou

Gunnison eyes trans-mo

By K.T. LUND
Times Staff Writer

Arapahoe County officials came to Gunnison County Tuesday to talk about the feasibility of constructing a hydroelectric dam at Union Park.

Arapahoe County and the cities of Gunnison and Parker obtained a preliminary permit from the Federal Energy Regulatory Commission (FERC) in November for a three-year study of a dam at Union Park. The three entities received the permit for the study instead of NECO and are negotiating with

NECO for its studies of the project.

"Our first step is to take a closer look at the project," Attorney Karl Kumli told the Gunnison County commissioners at lunch.

"Every six months we have to tell FERC what were up to," Kumli added and told county officials that he would like to know their concerns about a hydroelectric dam at Union Park.

Commissioner David Leinsdorf replied, "It's premature for the county to say anything about its concerns because we don't know anything about the project."

Kumli and Engineer Bill Mitzelfeld said

that they had no idea yet if the Union Park project that Arapahoe County and the cities of Gunnison and Parker envision will be as big as Blue Mesa as NECO had proposed.

They did say that they did envision both hydroelectric well as a trans-mountain diversion project. Arapahoe County would like to have a joint review process of the project with the Forest Service, the Division of Wildlife and Gunnison County.

Top student

s-mountain diversion

idea yet if the Union Park
Arapahoe County and the cities
Prker envision will be as
as NECO had proposed.
that they did envision both a
and a trans-mountain diver-
Arapahoe County would like to
in process of the project with
the Division of Wildlife
County.

Mitzelfeld said Arapahoe County is inven-
torying the impacts that a dam at Union Park
would have on wildlife, recreation, water
quality as well as the socio-economic impacts
that would occur.

Kumli said that whether the proposed Two
Forks Reservoir receives approval or not, the
Union Park proposal could still be built.

After the three entities study the Union
Park project, they can apply for a license to

construct the dam. According to the time
schedule, the entities would ask FERC for a
license in 1990 and might receive it by 1991.
Construction would begin in 1993.

Union Park lies southwest of Taylor
Reservoir and is a summer grazing area for
Gunnison area ranchers as well as a recre-
ation area for fishermen, backpackers and
hikers.

NECO negotiations benefit the city

Continued from page 1

will store water in the wet years on the west slope for use in the dry years on the east slope. But the city does have a stipulation in its contract with NECO that Gunnison can fight against any trans-mountain diversion of water plans.

Duree pointed out, however, that trans-mountain diversion is legal under Colorado water law.

"My concern is to protect the

water rights for the city," he said, "Not to tilt at windmills."

If Union Park Reservoir had existed in May, 1984, the Gunnison Valley could have avoided the flooding that occurred, according to Duree, for it could have stored the water that was spilling over Taylor Dam and led to the lowland flooding.

The City of Gunnison has always opposed negotiating with Aurora, because the city views Aurora as a

ing to wear down the Gunnison valley opposition through costly attrition, Duree noted. Aurora wanting two full-blown water trials as well as its continual stonewalling on court motions leads to money for water attorneys, he said.

"Delay does nothing but hurt Aurora," he explained. And that's why Gunnison has refused to attend the joint meetings between the litigants and Aurora and why Gunnison

Motions benefit the city of Gunnison

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"Delay does nothing but aid Aurora," he explained. And that is why Gunnison has refused to attend the joint meetings between the 42 litigants and Aurora and why Gunni-

son wants Aurora in water court as soon as possible.

NECO President Allen Miller said recently that NECO will generate power with its proposed pumped back Rocky Point Dam, a small reservoir above Taylor Reservoir. Meanwhile Arapahoe County and NECO are negotiating, according to Miller, so that the county, Gunnison and Parker will end up with the Union Park Reservoir.

Orange, Garfield County, Montana

Jan

NECO negotiations benefit city, attorney claims

By K.T. LUND
Times Staff Writer

*GET 27 Jan 88
1 add 3*

Gunnison City residents will have the water and electricity they need in the future thanks to the city's ongoing negotiations with Natural Energy Resources Company, City Attorney Russ Duree said in an interview last week.

Water Attorney Pete Klingsmith and other water experts have criticized Gunnison for dealing with NECO, but Duree dismissed that criticism.

"The citizens are getting storage for their water and getting electricity, and they're not out one penny," he noted.

Gunnison signed an \$3,000 agreement in 1986 with NECO for water storage in its proposed Union Park Dam, south of Taylor Reservoir, and the east slope town of

Parker made the same agreement.

Recently, when NECO's Federal Energy Regulatory Commission permit expired, Gunnison, Parker and Arapahoe County filed for their own FERC permit to study the feasibility of a Union Park Reservoir, which would be about the size of Blue Mesa Reservoir.

The three entities took that action to keep "hostile entities" from obtaining a feasibility study permit, Duree explained. Cities have first choice on such permits, so NECO, a private company, was at a disadvantage in renewing the license and in obtaining necessary permits for developing the project, he added.

Arapahoe County has the money not only to fund the multi-million dollar feasibility study but also to develop the Union Park hydroelectric project, but it needs cities Parker and Gunnison to help it obtain feder-

al licenses and permits. Duree maintains that Arapahoe County is far different from the City of Aurora, which thrives on growth and annexation. Arapahoe County is battling Aurora over Aurora's uncontrolled growth policies, he noted.

Union Park Reservoir will also generate electricity by pumping the water back and forth between Union Park and Taylor River.

The three entities can sell the electricity to other areas that need it, Duree said. "Or if Gunnison needs it, we can purchase it at a favorable rate," he said.

Duree contends that the environmental impacts of Union Park will be less than those of Aurora's Pieplant and Almont reservoirs and can be mitigated.

If Union Park Reservoir is developed in the 1990's as proposed, it

Continued on page 3

tax money from residents living in cities that already have utilities. Judge's ruling says city residents have no protection against tax increases that might result from the utilities start-up costs.

Last week the county formed the Arapahoe Water and Wastewater Authority. The authority will absorb the Arapahoe Water and Sanitation District, a utility formed 8 years ago by residents near Centennial Airport. The county says it does not foresee any tax increases. Authority will repay \$6.5 million loan from the county and eventually the authority will operate solely on user fees.

Authority hopes to "buy" 60,000 acre feet of Gunnison River Basin water - 326,000 gallons per acft.

Arapahoe sued again in water flap

By **HECTOR GUTIERREZ**
Rocky Mountain News Staff Writer

AURORA — City officials have filed a second lawsuit against Arapahoe County to try to block the county from operating a water utility.

Aurora and Englewood already have filed a lawsuit in Arapahoe County District Court against the county, claiming the county is using property tax money illegally to purchase the Arapahoe Water and Sanitation District.

The second lawsuit, filed on behalf of Aurora and Mayor Paul Tauer, makes the same allega-

tions, claiming the use of city property taxes to purchase the water utility amounts to double taxation.

City officials say commissioners cannot transfer \$6.6 million of county money to the recently established Arapahoe County Water and Wastewater Authority to purchase sewer taps from the sanitation district. They say they will seek a restraining order later this week to stop the authority.

"Aurora indicated that they were going to do everything they could to prevent Arapahoe County from getting into the utility business," said county manager Al Thelen.

Thelen says the county can use capital improvements money to finance the authority.

The authority held its first meeting yesterday. New directors are: commissioner Tom Eggert, president; Robert Thompson, an Arapahoe Water and Sanitation District board member, vice president; commissioner Bob Brooks, treasurer; and John Warford, a Cherry Creek Valley Water and Sanitation District board member, secretary.

The district and the county signed an agreement to establish the authority after a judge blocked the county from taking over the \$31 million utility.

Shown over next day - see R.M.N.'s

Take this Cholesterol

March 23, 1987

NATURAL ENERGY RESOURCES COMPANY

To: Governor Romer, Colorado Legislators, Colorado Media

Subject: Impact Of Two Forks On Colorado's West Slope

Most of the concern about environmental and socioeconomic damage from Two Forks Dam is focused on the East Slope. However, the greatest long term impact will occur on Colorado's West Slope.

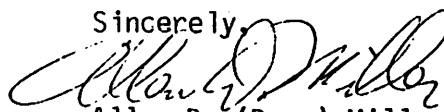
Denver already gets half of its water from tributaries of the Upper Colorado River, and almost half of the water required to fill Two Forks will come from Summit County. The Army Corps of Engineers' recently released Draft Environmental Impact Statement (EIS) shows Two Forks will only supply enough water to satisfy eleven years of Denver Metro growth. After Two Forks Dam, the Denver Water Department already has water rights and plans described in the EIS to triple the water that is currently being diverted to Denver from the Upper Colorado. This means the large Two Forks investment soon becomes the irresistible driving force to continue further "dewatering" of the Upper Colorado by Denver for the next fifty years.

The West Slope has historically relied on the Colorado River Water Conservation District to protect its water interests. Unfortunately, in a December 15th, 1986 agreement with the Denver Water Department, this District dropped its 20 year resistance to further transmountain diversions to Denver. In fact, they agreed not to object to Two Forks or its related future diversion plans, in exchange for construction and leasing of several small West Slope reservoirs that are primarily designed to facilitate Denver's thirst. The EIS contains only minimal data on the impact of these Two Forks related expansion plans, and it is doubtful Upper Colorado interests fully comprehend the long term impact on their river environments, tourist industry, agriculture, and economic development.

The Upper Gunnison River Basin is as water prolific as the Upper Colorado. This basin has never been tapped for transmountain diversion, although numerous studies have shown there is considerable surplus water that could be used on the Front Range. The Union Park Water Supply Project and Aurora's Collegiate Range concept have engineering studies that show the feasibility of 42 mile gravity flow conduits from the Upper Gunnison to Denver's Antero Reservoir on the South Platte. These projects have always been cost effective alternatives to Two Forks, and yet they were not considered in the Two Forks EIS, as required by the National Environmental Protection Act. The Upper Gunnison has only one fifth the population of the Upper Colorado, needs economic development, and should welcome the opportunity to exploit their surplus water to provide a lower cost water supply system for Denver that is environmentally sound.

If Colorado had a water policy, Two Forks would not be off the drawing board. It just doesn't make sense to drain the same water source when better alternatives are available. The Colorado Water Conservation Board or the Colorado Water Resources and Power Development Authority should develop a state water policy, and all Coloradans should demand the Two Forks Draft EIS be revised to include all reasonable alternatives. The Two Forks decision is too critical to Colorado to be left to the Denver Water Department.

Sincerely,



Allen D. (Dave) Miller
President

ADM/bm

NATURAL ENERGY RESOURCES COMPANY

March 19, 1987

Mr. William H. Miller
Secretary - Manager
Board of Water Commissioners
City and County of Denver
1600 West 12th Avenue
Denver, CO. 80254

Subject: Evaluation of Union Park Water Supply Project

Dear Mr. Miller:

Our engineering studies show the high altitude Union Park Reservoir and transmountain diversion from the Upper Gunnison will provide the Denver water system a 50% greater safe annual yield for about half the per acre foot cost of Two Forks. We also believe Union Park will provide important benefits to both slopes, and the net environmental impact will be substantially less than Two Forks. Because of these claims, we understand you are now doing a brief internal engineering evaluation of Union Park to determine if it should be considered in the Metro Denver Draft EIS.

Although you apparently do not want our assistance in this evaluation, please be advised our engineering firms stand ready to answer any questions you might have. Questions involving engineering, hydrology, and costing estimates should be directed to Mr. Glen Rockwell, Ebasco Services project engineer at (303) 988-2202. Environmental questions should be directed to Dr. Jean Tate, Manager, Environmental Projects at the same telephone number.

In addition to obvious cost and environmental considerations, we believe Colorado has good strategic reasons why Denver's future transmountain water should come from the Upper Gunnison instead of the Upper Colorado Basin, which has already been severely "dewatered" by the East Slope. Especially since Two Forks and its expansion plans covered in the Draft EIS are aimed exclusively to additional Upper Colorado diversions for the next fifty years.

If after a fair evaluation, Two Forks is clearly the superior alternative, we will agree to withdraw our opposition to the Draft EIS which has ignored several important alternatives, including Union Park.

We appreciate your willingness to take a look at Union Park, and stand ready to assist in any way to facilitate your effort.

Sincerely,



Allen D. (Dave) Miller
President

ADM/bm

cc: Governor Romer, State Legislators, Corps of Engineers, Metro Water Providers

NATURAL ENERGY RESOURCES COMPANY

March 5, 1987

Governor Roy Romer and Colorado State Legislators
State Capitol Building
Denver, CO. 80203

Subject: Colorado Water Planning and Two Forks Dam

Dear Governor Romer and Legislators:

Colorado water laws and policies have worked reasonably well throughout the state's history. The Bureau of Reclamation has historically done the regional planning and construction of major projects, while our cities have developed their own smaller water supply projects. However, in recent years the Bureau's role is being reduced to management of existing projects, and in Colorado's case the broad planning function for the state is now being filled primarily by the Denver Water Department (DWD), for all practical purposes. Denver area is by far the state's dominant water market, and the 40 Metro Water Providers who are paying for 80% of the Metropolitan Denver Water Supply EIS are primarily dependent on DWD's experience, expertise, and water rights.

The decision on Two Forks Dam was actually made many years ago when DWD quietly started accumulating additional water rights in the Upper Colorado Basin west of Denver. Although numerous Bureau studies have shown the Upper Gunnison Basin to also be an excellent source of water for East Slope use, this important alternative was completely ignored in the Draft EIS. Thornton's excellent concept to recycle Northern Colorado irrigation water was also completely ignored. As a result of this bias, the old Two Forks Dam idea is still DWD's preferred concept, and all of the many future water projects described in the Draft EIS will continue to take more and more water from the same rivers in the Upper Colorado Basin. Apparently few people know about the other reasonable alternatives or the overall impact of Two Forks on the state's future water development. The National Environmental Protection Act (NEPA) requires evaluation of all reasonable alternatives in the EIS process.

The Bureau's changed role has definitely left a water planning vacuum in Colorado. As Mike Strang says, Colorado's water business is a "Byzantine World". Very few really understand it. What is clear, however, DWD exerts a great deal of power that is not being used in the best overall interests of our great state.

The attached material on Union Park describes a water supply project for Metro Denver that is substantially superior to Two Forks in every respect. We would be honored to provide briefings whenever and wherever desired.

Sincerely,



Allen D. (Dave) Miller
President

ADM/bm

NATURAL ENERGY RESOURCES COMPANY

March 11, 1987

Mr. David Hall, Editor
The Denver Post
650 15th Street
Denver, CO. 80202

Mr. Ralph Looney, Editor
Rocky Mountain News
P. O. Box 719
Denver, CO. 80201

Subject: Nondisclosure of Two Forks Hydrology Data

Dear Mr. Hall and Mr. Looney:

The attached document extracted from the Metropolitan Denver Draft EIS summarizes Denver Water Department's refusal to disclose their basic hydrology analysis to the public. This data is the heart of the water yield and justification for Two Forks Dam.

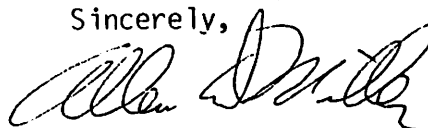
The public needs this information to properly evaluate and comment on the Draft EIS, which is their right under the National Environmental Protection Act (NEPA). We particularly need this data to computer simulate Two Forks with Union Park Water Supply Project to show a superior alternative was ignored. Our many offers to assist DWD in a computer comparison, using their simulation models, have unfortunately also been ignored.

We are bringing this situation to your attention because of the media's historic interest in having public matters open to the public. There are several better alternatives to Two Forks, which have been submerged and frustrated because of DWD's power and control over the EIS process as it moves toward their predetermined solution.

If matters of secrecy and bias are not soon corrected in the Draft EIS, this entire effort is headed for certain disaster. The people of Colorado will be the ultimate losers.

Thank you for your consideration.

Sincerely,



Allen D. (Dave) Miller
President

ADM/bm

Encl. EIS Extract, Vol. II 1-B

cc: Governor Romer
Colorado State Legislators

*Notes for Garrison
County Planning Comm.
from presentation to
Planning Comm. in
Daly March 1987.*

This is one of the expansion ideas of the Union Park concept, and it shows the two reservoirs side by side, and it shows tunnels going off laterally to other drainages. This shows the East River, with a tunnel, and it would actually be a gravity system to Taylor Park Reservoir, and then you pump it up into Union Park, and the same (???) from Quartz Creek. So we feel that an additional 45,000 acre feet could be brought into the system, and the way this would work is that in the heavy run-off period, you would pull large quantities of water in the May-July time period into Taylor Park and pump it up into here (Union Park reservoir). In the dry periods, in the fall and so on, when the streams can get very low, we could actually release a large amount of this back to the same conduits and using a gravity system, because you've already gained your altitude, so that same water could be put back into this system, run down East River, or down Quartz Creek, so Tomichi, instead of getting very low in the late summer and fall time periods can be maintained at good stream flows and the same for the East River. What this would do from an environmental and from an irrigation standpoint, it would give you a much longer period when you could actually do some irrigation. Construction costs for this would be fairly high, but the cost per acre foot is about what the cost for Two Forks would be right now.

Laura Anderson asked where the tunnel would come out of the East River, and how it would be done. Miller said that it could be either a diversion point or a reservoir, and will be right where two creeks come together. Anderson asked for the specific location of the two creeks; Miller wasn't sure, but said that the site had to be at approximately 9,400' elevation. Bill Trampe thought that Miller was talking about the Copper Creek area near Gothic. Miller estimated that construction of that project would be 25 years away.

TRUSTEES

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Ms. Wren Wirth
Washington, D.C.

Mr. Klaus Wisiol
Commonwealth Edison Co
Chicago

Ms. Susan Allen
Director
RMBL, Crested Butte

Ms. Marilyn Shaw
Development Officer
San Francisco

31 March 1987

Mr. Allen D. Miller, President
Natural Energy Resources Co.
P.O. Box 607
Palmer Lake, CO 80133

Dear Mr. Miller:

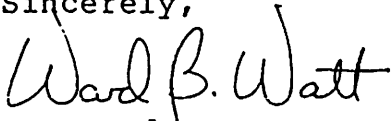
We would like to express our surprise at reading in the Crested Butte Chronicle and Pilot (27 February 1987) of a proposal by the Natural Energy Resources Company (NECO) that involves the possible future construction of a dam with reservoir at the juncture of the East River and Copper Creek. This is, of course, the private property of the Rocky Mountain Biological Laboratory, and you can imagine our dismay at learning in the newspaper of a plan to flood our field station.

RMBL is celebrating 60 years of excellence as a research and teaching institution, and its world-wide reputation is well-founded. We believe that our field studies, some based on decades of data collection, comprise a unique and invaluable resource, not just for Gunnison County but nationally and internationally. In addition to the inestimable value of our research and education programs, we have a positive economic impact in Crested Butte and Gunnison County as a whole. A recent study we completed for the Boettcher Foundation of Denver, which is generous enough to provide financial support for RMBL, indicated that a conservative estimate of the Lab's annual economic contribution within the county is \$784,140.

Mr. Allen D. Miller
31 March 1987
Page 2

We'd like to believe that in the future we would have the opportunity to discuss any such plans for our property and our future with you before hearing of them in the newspaper. Please believe that we are interested in hearing your proposals and having an opportunity to respond, and don't hesitate to contact either or both of us.

Sincerely,



Dr. Ward B. Watt
President, RMBL
Dept. of Biological Sciences
Stanford University
Stanford, CA 94305



Ms. Susan Allen
Director, RMBL
P.O. Box 519
Crested Butte, CO 81224

WBW/SA/mb1

cc: Gunnison County Commissioners
Upper Gunnison Water Conservancy District
Aurora Collegiate Range Project Manager
U.S. Army Corps of Engineers

date: 3/5/87

to: Hugo Ferchau, professor of Biology, WSC

from: Marlene Zanetell, Executive Director, Rural Communities
Institute, WSC

Re: Study of Gunnison/Uncompahgre Basin Water Resources, Phase 1

STUDY PHASE 1: SOCIO-ECONOMIC INFORMATION

1. To assimilate and develop current sociological and economic data/information pertinent to study at this level, will involve:

a. updating human/social service and public service data bases for the Gunnison/Uncompahgre basin area; information will include transportation, education, law enforcement, and health-related services

b. updating data on economic bases and profiles of occupational identity for the Gunnison/Uncompahgre basin, and selected key areas within basin.

2. Methodology will include:

Utilization of information and resources available at or through the Western State College Savage Library (federal and state depository) including U.S. Census data; utilization of existing data in planning reports that have been prepared for the Gunnison/Uncompahgre area, such as the BMML-Amox reports for the Gunnison area, District 10 Regional Planning Commission Community Profiles, pertinent studies of the Rural Communities Institute, relevant EIS materials for the basin. Information derived from these sources and others will be brought up to date for appropriate use.

3. Breakdown of projected costs to the Rural Communities Institute:

Research, data processing (1-2 students)	\$4,500.00
Data compilation, statistical analysis, writing and editing	1,800.00
Travel (to include 3-4 overnight trips Montrose area and 1 trip Denver: approx 1250 miles x .26=\$330.00, plus meals and lodging, approx \$420.00)	750.00
Computer and office expenses	950.00
Total	<u>\$8,000.00</u>

Page 2, Zanetell to Ferchau, 3/5/87

4. Coordinator: Marlene Zanetell, Executive Director of Rural Communities Institute, Western State College

Background brief:

Zanetell's responsibilities at the Rural Communities Institute, which is a community and economic development component of Western State College, include: Administration of RCI's technical assistance programs which extend direct technical assistance to local governments primarily in Colorado Region 10 (a 6-county area which includes the Gunnison/Uncom-

pahgre basin area). Typical projects develop socio-economic data to prepare community and economic profiles, needs assessments and marketing surveys. In 1986 projects included: Senior housing needs assessment and survey for Gunnison and Hinsdale Counties; Computer Program design for Montrose Economic Profile Data.

Zanetell has also developed the programs (1985,1986) for the 10th and 11th annual Colorado Water Workshops, held at WSC. This respected conference addresses critical water resource issues of Colorado and the arid West.

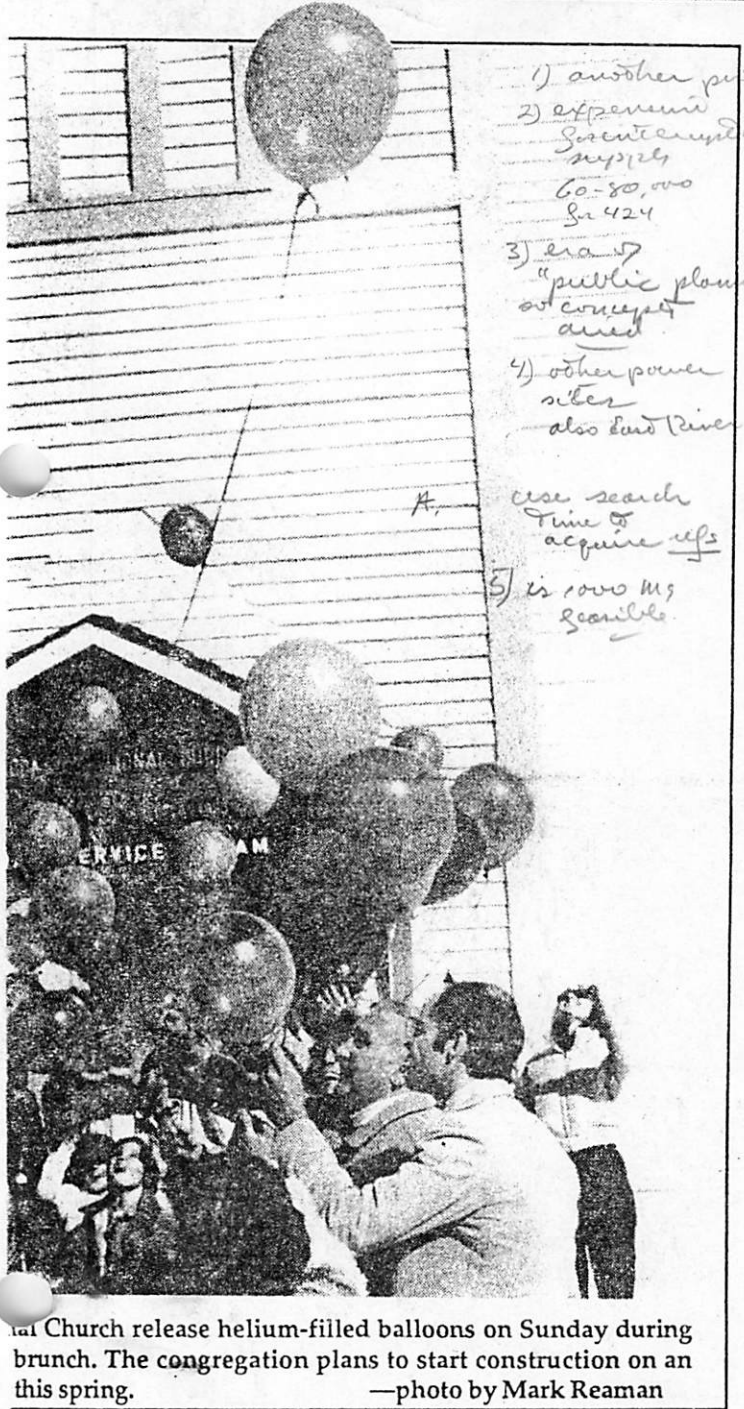
Prior to assuming responsibilities at the RCI in March, 1985, Zanetell served as staff assistant to U.S. Representative Ray Kogovsek (3rd Dist., CO) from 1978-1984, and developed knowledge of Western Colorado and the water, land and natural resource issues of importance to that area.

RONICLE & PILOT

February 27, 1987

25 cents

OF CRESTED BUTTE AND MT. CRESTED BUTTE, COLORADO VOL. 26 NO. 11



Church release helium-filled balloons on Sunday during brunch. The congregation plans to start construction on an this spring. —photo by Mark Reaman

- 1) another proposal
- 2) expense \$424 million
- 3) era of "public planning" or concept area
- 4) other power sites also East River
- 5) is now more feasible

\$424 million project

3rd water suitor wants to divert Gunnison's water to Eastern Slope

by Laura Anderson

If the Natural Energy Resources Company (NECO) wins its battle for Gunnison County water rights, it plans to build a reservoir almost the size of Blue Mesa in Union Park to divert water to Denver and satisfy growing water demands on the Front Range. Dave Miller, company president, outlined NECO's plan at Friday's Gunnison County Planning Commission meeting.

NECO's proposed Union Park Reservoir would hold as much as 900,000 acre feet of water, twice as much as Denver's total current storage capacity. Depending on whose figures are used regarding the minimum stream flow requirements for the Taylor River, a yearly average of 60,000 to 80,000 acre feet of water would be pumped from the Taylor Reservoir, up 800 feet into Union Park, located at a 10,052 foot elevation. Miller called the environmental impact of the proposed

reservoir, "minimal." Miller explained that the water would only be taken from the Taylor Reservoir when a surplus existed. During very dry years no water would be available while during wet years 140,000 acre feet might be a reasonable expectation. The water would be stored in the Union Park Reservoir until Denver needed it. Then it would be piped through a 42 mile conduit under the Continental Divide into Cottonwood Creek which would flow into the Arkansas River and end up in Denver's Antero Reservoir. The cost of the plan would be \$424 million, making it one of the largest construction projects in the country.

Gothic might be site of water tunnel to Union Park

If the Union Park Reservoir is built, NECO eventually may want to expand its operation by appropriating water from the East River and

continued on page twelve

Only five students presently enrolled
 Future of Crested Butte's 7th, 8th grades to be discussed Friday

Championships begin March 2

officials will enjoy the fine Slalom 10 a.m.; start - Upper

Water rights battle intensifies

Another suitor surfaces with water

continued from page one

Quartz Creek. He said that the water could be taken during the heavy runoff, piped to the Union Park basin via tunnel, and put back into the rivers when they were low. Although Miller showed a map of where the diversion would begin in the East River, he was not sure of its location. However, he believed it might be at the confluence of Copper Creek and the East River, outside the town of Gothic. A small reservoir would also be built there. The construction of this tunnel would be at least 25 years away. Another expansion idea would pump water from Blue Mesa Reservoir to Union Park from which it could be conducted to the Front Range.

Aurora, Gunnison Water District, Two Forks also fighting for water

At this point, whether or not the Union Park project will ever be built is still questionable. NECO is competing with the City of Aurora for the same water in the Taylor River drainage. As

part of their Collegiate Peaks project, Aurora wants to build the Pieplant Reservoir for transmountain diversion and also the East River Reservoir north of Almont to replenish users' water that the transmountain diversion would deplete.

In addition, the Upper Gunnison Water Conservation District has filed for some of those same rights based on a 1975 contract. Who actually ends up with the water rights will be decided in Water Court, either by litigation or by negotiation between the interested parties.

The Two Forks Reservoir proposal, on the Eastern Slope, complicates the matter further. Two Forks would be a reservoir the size of the Union Park project built in the foothills of the Front Range outside Denver on the South Platte River through cooperation between Denver, Aurora, and many of the smaller East Slope suburbs. Water from the Upper Colorado drainage would be diverted through the Roberts Tunnel to be stored in the

reservoir until the cities needed it. If Two Forks is built, NECO would probably abandon its Union Park Reservoir proposal since stockholders believe that there would not be buyers for its water. Aurora has indicated that it feels differently and would continue with the Collegiate Peaks project even if Two Forks is approved.

NECO recently wrote a letter asking Denver to delay the public hearings on the Metropolitan Denver Water Supply Draft Environmental Impact Statement, a massive compilation which has

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"East Colorado grabbed all the water, now they're complaining because of pollution. Why not send the water where there is water?" —Purvis

recently been released. NECO believes that the Draft EIS does not look at every alternative, favoring Two Forks while ignoring the potential of the Union Park Reservoir. Many objections to Two Forks have been raised including its impact on endangered species and the bighorn sheep, deer and elk habitat, as well as the fact that it would dam up one of Colorado's eight

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Church Directory

Oh Be Joyful Baptist Chapel

Crested Butte School • 507 Maroon • 349-6237

Every Sunday: 9am Bible Study

10am Worship Service

... battle intensifies as Gunnison surfaces with water diversion plans

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Supply Draft Environmental
Impact Statement, a massive
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Planning Commission that
NECO already has the water
rights for the proposed \$100
million Rocky Point Reservoir,
which he believes would be
"the most efficient power
location in the country", and
will file a final application for
this project in September, 1987.
Rocky Point Reservoir, at
11,658 feet elevation would be a
4000-5000 acre foot body of
water above Taylor Reservoir
with a small ring dam, used to
generate 1000 megawatts of
peaking power which would be
marketed in Colorado as well
as states south and west of us.

In the proposal, water from

Colorado grabbed all the
industry and now they're
complaining because they have
pollution. Why not send the
industry here where there is
water?"

Tom Henry, the District
Wildlife Manager for the
Department of Wildlife
questioned Miller's terming the
environmental impacts of
NECO's plan "minor."

"I do see major problems,"
Henry said. He brought up the
elk migration routes which
cross Union Park as well as the
calving and fawning that take
place there and pointed out
that there are elk and bighorn
sheep herds "right in the
middle" of the proposed Rocky
Point Reservoir site.

"It looks like Taylor
Reservoir is sitting there like a
toilet," Rick Sherman, wildlife
biologist, said, referring to the
draining and filling of the
Taylor Reservoir for the
projects. "You're talking about
an important resource of
Gunnison County," he said. "As
a fisheries biologist I don't see
you maintaining enough water
to keep a major fishery going."

Dick Bratton, attorney for
the Upper Gunnison River
Water Conservancy District
raised a number of concerns. He
questioned the ease of
transporting power out of
Taylor Park, whether a market
exists for this power, and
stated that the amount of
water available in the Upper
Gunnison basin is "debatable."
Bratton also took issue with
NECO's desire to take Gunnison
County water without having
to pay for it. "There's very
tough competition going on,"
Bratton said after the meeting.
"They (NECO) are making it
sound simple but it's very
complex."

*"East Colorado grabbed all the industry and
now they're complaining because they have
pollution. Why not send the industry here
where there is water?" —Purvis Vickers*

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Two Forks have been raised
including its impact on
endangered species and the
bighorn sheep, deer and elk
habitat, as well as the fact
that it would dam up one of
Colorado's eight gold medal
fisheries. The environmental
impacts of Two Forks may cost
the users more than
\$100,000,000 to mitigate.
NECO believes that the Union
Park Reservoir would be a much
more cost-effective alternative.

Rocky Point Reservoir
Miller also told the

the Taylor Reservoir would be
pumped up 2100 feet into the
Rocky Point Reservoir during
periods of low demand through
a 17 and a half foot tunnel and
released through reversible
pump generation during high
demand times. NECO obtained
these water rights for
nonconsumptive use in 1982 and
began drilling the site for
testing purposes last summer.
Whether or not the Union Park
Reservoir becomes a reality,
NECO hopes to build the Rocky
Point plant and could have it on
line as early as 1995.

Residents raise concerns

"How will this (Union
Park and Rocky Point) benefit
the people in Gunnison
County?" Water Board member
Purvis Vickers asked. "Ea tern

History

Baptist Chapel
507 Maroon • 349-6237
9am Bible Study
Worship Service

Saints Catholic
349-0808
8:30am Sunday Mass
9:30am Thursday
Mass

Congregational
349-6405
Sunday Worship

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water district takes a step into the

Gunnison water district enters "big league" in

by Laura Anderson

The Gunnison basin is on the cutting edge of what's happening with Colorado water," Dick Bratton said in an interview Monday. Bratton, vice-president of the Colorado Water Resources and Power Development Authority and attorney for the Upper Gunnison River Water Con-

servancy District, stated that in 1986 the water district filed for the same water rights that Aurora and NECO are competing for.

The Gunnison water district asserts that they have a senior claim to this water based on a 1975 contract between the water district, the Uncompahgre Valley Water Users, the Bureau of Reclamation and various other governmental boards.

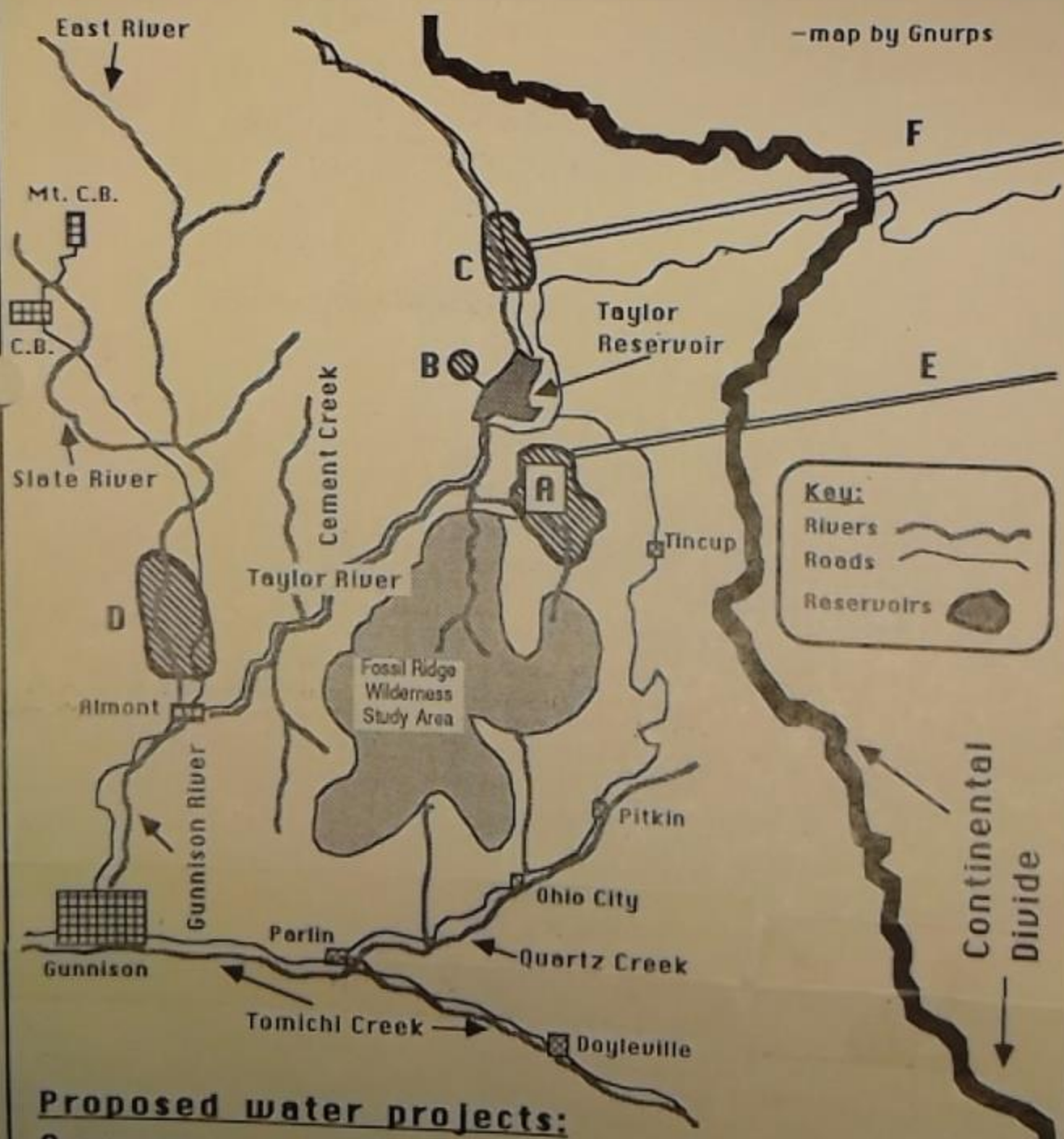
The contract gives the Gunnison water district the right to store water for the Uncompahgre Valley users in Blue Mesa and to control water releases from the Taylor River which would be preempted if Aurora or NECO obtained the rights they are asking for.

The Gunnison water district has been using this contract as a basis for storing and regulating the water for the past 12 years as well as using it to increase fisheries and irrigation, and to control flooding.

The Upper Gunnison River Water Conservancy District has also filed for the second filling of the Taylor Reservoir, meaning that if there is enough water to fill the Taylor Reservoir more than once in a year, they would have the rights for all 106,000 acre feet of that water. No one else has filed for the second filling.

Bratton said that litigation between the three competitors could take as long as 10 to 15 years. If Gunnison receives the water rights it could place the county in a very powerful position and potentially bring huge economic gain to the area. Bratton estimated that if the water

Water projects proposed by Aurora & NECO



Proposed water projects:

- A Union Park Reservoir (NECO)
- B Rocky Point Pumped Storage (NECO)
- C Pieplant Reservoir (Aurora)
- D East River Reservoir (Aurora)
- E NECO transmountain diversion tunnel
- F Aurora transmountain diversion tunnel

Water district takes a step into the arena

Water district enters "big league" in water battle

Opening with Colorado Water Resources and Power Development Authority and attorney for the Upper Gunnison River Water Con-

servancy District, stated that in 1986 the water district filed for the same water rights that Aurora and NECO are competing for.

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Bratton said that litigation between the three competitors could take as long as 10 to 15 years. If Gunnison receives the water rights it could place the county in a very powerful position and potentially bring huge economic gain to the area. Bratton estimated that if the water district received and then sold

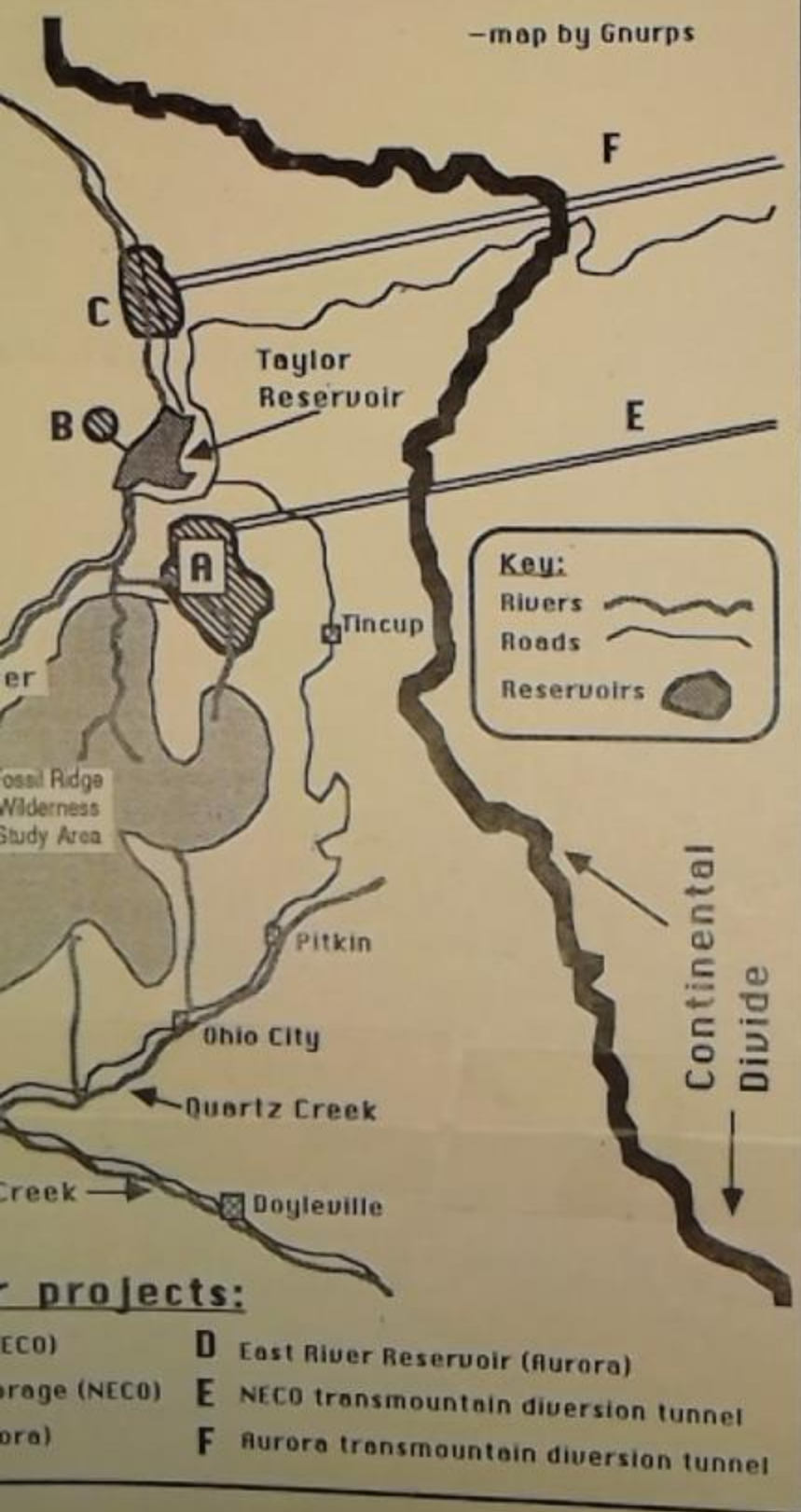
some of the Taylor River water rights, prices could range between \$1500 and \$4000 per acre foot if sold in perpetuity, or \$100 to \$200 per acre foot each year if sold annually. When you get into hundreds of thousands of acre feet of water, this translates to immense amounts of money that would flow into Gunnison County. Clearly, this economic boost is extremely uncertain at this point and, in any case, would not happen for many years. "We're talking big dollars," Bratton said. "We're in the big league."

Bratton has asked both NECO and Aurora to consider postponing litigation and negotiation in Water Court on the disputed rights until the Upper Gunnison River Valley Resource Study is complete. This is a \$555,000 study of the Upper Gunnison and Uncompahgre River watersheds, which will begin in March and is expected to take approximately two years to complete.

In the study, the bulk of which is being funded by the Colorado River Water Conservation District, an independent engineering firm will collect data, describe water supply systems and recreational facilities, assess basin hydrology and evaluate recreational, environmental and economic opportunities based on the existing water supply. Bratton believes that the examination of the effects of transmountain diversion might be the subject of a second, future study.

Both Aurora and NECO representatives seemed hesitant about asking the Water Court to put off decisions because of the study.

Proposed projects by Aurora & NECO



Gunnison Country Times February 25, 1987

Union Park Reservoir

BY K.T. LUND

Times Staff Writer

Both the east and west slopes of Colorado would benefit if Union Park Reservoir replaces the Two Forks and the Aurora's Collegiate Range water projects, a Natural Energy Resources Company (NECO) official said Friday.

NECO President Dave Miller told 40 persons at the Gunnison County Planning Commission meeting that the proposed Union Park Reservoir, southwest of Taylor Reservoir at the headwaters of Lottis Creek, would "be slightly smaller than Blue Mesa reservoir."

Union Park could hold 900,000 acre feet of water for both sides of the divide, Miller contended, whereas the proposed Two Forks reservoir near Bailey would only provide half of that and for the Front Range only. Miller added that Aurora's Collegiate Range project would also provide less water and only for the Denver area.

In addition to Union Park Reservoir, NECO wants to build

Rocky Point Reservoir, a 4,000-acre-foot ring dam above Taylor Reservoir. This pump back dam would generate and store power without losing water, pumping water back and forth between Taylor and Rocky Point reservoirs.

Miller explained NECO would fill Union Park Reservoir from excess spring run off water. NECO could then add water to both east and west slope streams in dry years, and store it in wet years.

Union Park Reservoir would meet Colorado water demands while causing "minimal environmental impact," Miller said.

He noted Two Forks environmental mitigation costs range between \$30 million and \$100 million because Two Forks will have a "major environmental impact." He added the Collegiate Range project with its Pieplant Reservoir, near Taylor Reservoir, and its second reservoir near Almont would have moderate environmental impact.

But Fish Biologist Rick Sherman with the Division of

Wildlife disagreed that Union Park Reservoir will have a minimal environmental impact.

Sherman contended Union Park and Rocky Point reservoirs will have a impact not only on the fish in the Taylor River Reservoir but also on the Big Horn sheep herds in the Union Park and Rocky

NECO p

Natural Energy Resources Company (NECO) President Dave Miller praised the City of Gunnison Friday, for having the foresight to make sure city residents will buy power and water at half the price others will have to pay.

In its \$1,000 contract with NECO, the city has ensured city residents will have a better deal than other Front Range water and power users, Miller said.

But that contract becomes effective only if NECO builds its 900,000 square-

Gunnison Country Times February 25, 1987 p 1 and 6

ark Reservoir 'viable'

Rocky Point Reservoir, a 1,000-acre-foot ring dam above Taylor Reservoir. This pump back dam would generate and store power without losing water, pumping water back and forth between Taylor and Rocky Point reservoirs.

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But Fish Biologist Rick Sherman with the Division of

Wildlife disagreed that Union Park Reservoir will have a minor environmental impact.

Sherman contended both Union Park and Rocky Point reservoirs will have a major impact not only on the fisheries in the Taylor River and Reservoir but also on the elk and Big Horn sheep herds in both the Union Park and Rocky Point

areas.

Miller replied that the overall environmental effect is "minimal in relation to other alternatives" like Two Forks.

"There are plusses in taking water out of the streams when they're too full and putting it back when they're too empty."

Turn to pg. 3

NECO praises city

Natural Energy Resources Company (NECO) President Dave Miller praised the City of Gunnison Friday, for having the foresight to make sure city residents will buy power and water at half the price others will have to pay.

In its \$1,000 contract with NECO, the city has ensured city residents will have a better deal than other future water and power NECO users, Miller said.

But that contract becomes effective only if NECO builds its 900,000 square-foot

reservoir at Union Park for water and its 4,000-5,000 square-foot pump back reservoir at Rocky Point, above Taylor Reservoir, for power.

Miller added that Parker, Colorado, has also signed a similar contract with NECO.

In response to a question, Miller said Gunnison understood Union Park Reservoir's function as a trans-mountain diversion

Turn to pg. 6

NATURAL ENERGY RESOURCES COMPANY

February 16, 1987

Mr. William H. Miller
Secretary - Manager
Board of Water Commissioners
City and County of Denver
1600 West Twelfth Avenue
Denver, CO. 80254

Mr. Robert C. McWhinnie
Chief Executive Officer
Metropolitan Water Providers
518 South Cherry Street
Denver, CO. 80222

Colonel Steven G. West
U. S. Army Corps of Engineers
215 North 17th Street
Omaha, Nebraska 68102

Subject: Draft EIS - Union Park Water Supply Project Alternative

Gentlemen:

Natural Energy Resources Company (NECO) hereby requests delay of the public hearings on the Metropolitan Denver Water Supply Draft Environmental Impact Statement (Draft EIS). A delay is essential to provide the public an opportunity to compare the viable Union Park alternative with the Draft EIS alternatives before the Final EIS is issued. NECO's position is based on the following:

1. Evaluation of Alternatives THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA), AS AMENDED, 42 U.S.C. 4321, ET SEQ. and the FOREST AND RANGE LAND RENEWABLE RESOURCES PLANNING ACT OF 1974, AS AMENDED BY THE NATIONAL FOREST MANAGEMENT ACT OF 1976 specifically require evaluation of all viable alternatives in the EIS process. Unfortunately, Union Park is a legitimate alternative that was not considered.

2. Upper Gunnison Water The attached Bureau of Reclamation's Summary of Research on exporting water from the Upper Gunnison shows this alternative was well known to the Colorado water community since the late 1930's (atch.1). NECO was formed in 1982 by water attorneys and retired Bureau executives who knew there was considerable unallocated water that could be used on the East Slope for municipal purposes. Aurora discovered this fact from a NECO founder, and their independent hydrology study confirmed the numerous previous studies. For some unknown reason, there appears to be no evidence the Upper Gunnison was considered in the scoping of over 100 Denver water supply alternatives for the Draft EIS. Importation of water from the Missouri River was considered, while the ideal Union Park Reservoir site was ignored. Union Park is located in the state's wettest untapped basin only 42 miles by gravity conduit to Denver's Antero Reservoir.

3. Efficiency of Union Park Attachment 2 shows how an average of 60,000 acre feet per year from the high altitude Union Park Reservoir can improve the overall efficiency of Denver Water Department's (DWD) existing reservoir system (Antero, Eleven Mile, Cheeseman, and Dillon). Depending on the minimum stream flow requirements assumed for the Taylor River, a yearly average of 60 to 80,000 acre feet of water can be pumped from Taylor Park Reservoir into Union Park storage to augment Denver's system whenever demand dictates. The upper graph (extracted from the Draft EIS) indicates a wide year to year variation in weather caused divertible yield for the existing system. Although Denver's total current storage capacity is 483,000 acre feet, the safe annual yield is only 295,000 acre feet because of the need to cover the unpredictable dry periods indicated by the red areas. The blue areas indicate the actual volume of water required from Union Park in dry years to increase DWD's safe annual yield from 295 to 450,000 acre feet. This equates to 155,000 acre feet increase in safe annual yield, compared to 98,000 increase with the Two Forks alternative. The bottom chart shows how the 900,000 acre feet Union Park Reservoir fluxuates using actual inflows and outflows to maintain 450,000 safe annual yield for Denver's total system. In other words, this yearly average 60,000 acre feet of insurance water from the West Slope actually multiplies into 155,000 acre feet increase in safe annual yield for Metro Denver.

P

The Bureau of Reclamation controls water releases from Taylor Park Reservoir. Assuming a lower (more likely) minimum stream flow on the Taylor River, there would be a yearly average of 80,000 acre feet of surplus water that could be pumped into Union Park for transmountain diversion. With this additional 20,000 acre feet, the safe annual yield of Denver's system would be increased by 25,000 acre feet for a total safe annual yield of 475,000 acre feet (Atch.3). This shows the multiplier effect decreases with the higher volumes.

about 111,000 cfs year round
20,000 acft
27,700 cfs
long term

In addition to this multiplier effect, Union Park insurance water should provide greater operational flexibility to increase the efficiency of Denver's existing reservoir system. For example, current practice is to maintain nearly full reservoirs as much as possible to cover the unpredictable dry periods. This means there is often insufficient storage available to capture infrequent flood waters. This is the primary purpose of Two Forks Dam. However, with the insurance water available from Union Park, lower optimum operating levels could be maintained with confidence to capture the same flood waters that are needed to obtain an increase in the safe annual yield under the Two Forks concept. We believe Denver Water Board's (DWB) existing river flow and reservoir models can be readily used to computer simulate different operational scenarios to show additional East Slope storage is not required with Union Park Reservoir. NECO has offered DWB engineering assistance on several occasions to expedite a computer simulation to help determine the total real value of Union Park to the current Denver system.

Check & Review
W.D.

topping up
Capacity is not different than
Denver would
more storage?

4. Cost and Yield Comparison Attachment 4 summarizes the economic and environmental/socioeconomic costs and benefits of the Union Park, Two Forks, and Collegiate Range alternatives. Although the construction costs are comparable using the same estimating criteria, the dollar costs per acre foot of yield are about 50% less with Union Park. The environmental and socioeconomic costs of Union Park and Collegiate Range have not been thoroughly evaluated. However, preliminary analysis indicates the remote, off river, Union Park site is relatively benign compared to the other alternatives. In fact, Union Park may have an overall positive environmental impact because the "dry year" concept is

P.
Cost per acre foot
with stream
differs

designed to extract water from rivers during flood times and then augment river flows on both slopes during critical dry periods when river ecosystems are endangered. We believe further study will show the dramatic economic and environmental/socioeconomic advantages of Union Park will be even greater than indicated on this chart.

5. Future Expansion Attachment 4 also shows the weighted average cost of the various expansion potentials of the three alternatives. Although the capital costs are comparable, we believe the environmental and socioeconomic costs of DWB's various expansion systems identified in the Draft EIS will render them unacceptable when they are fully understood by the people of Colorado. After Two Forks, all of DWB's future expansion plans require additional water from the Upper Colorado Basin. These rivers have already been hard hit by transmountain diversions, and it is also the fastest growing and most affluent region on the West Slope. This area needs its remaining water for projected future urban growth as well as for aesthetic and environmental reasons. Even though DWB may have controlling water rights in this important area, future political pressure will probably render these rights useless for Metro Denver growth.

In contrast, the Upper Gunnison/Uncompahgre Valley area is sparsely populated, remote from Front Range population pressure, and has never been tapped for transmountain diversion. Because of the economic trends in agriculture, the actual requirement for water is decreasing in this extensive farming and ranching area. As a result, more water is being lost by Colorado to the down river states. In the long term, it appears water owners in the Gunnison Basin will be looking for ways to realize a higher use and return for some of their water that is surplus to agriculture needs.

Rocky Point Pumped Storage Project Our January 14, 1987 Special Water Report to the people of Colorado also outlines the future benefits Colorado will realize from NECO's Rocky Point Pumped Storage Project. This project will initially supply 1,000 megawatts of clean peaking power for Southwestern states. If this large power operation were owned by a Colorado or Metro Denver Water and Power Authority, the expected profit from power exportation to other states could pay for much of the cost of Union Park.

see
1/14/87
letter

Summary In summary, Union Park is economically and environmentally superior to the alternatives currently considered in the Draft EIS. It is also substantially more in harmony with the long term trends and interests of both slopes and the people of Colorado. In addition, most of the cost of Union Park could be covered by out of state power sales from Rocky Point if both projects are controlled under a single authority.

In view of the rationale contained in this letter, NECO respectfully requests the Draft EIS review process be modified to accommodate a fair comparison of the Union Park alternative. We will continue to offer our assistance to analyze the hydrology, which could be confirmed in less than 60 days. Although more time would be required to confirm the detailed geologic, engineering, environmental, and socioeconomic estimates, we believe a concentrated review of existing data could be completed in 60 days to give reasonable estimates and confidence in the Union Park alternative.

The short term decision between Union Park and Two Forks is extremely important to the long term development of Colorado water for the next 50 years. If Two Forks is constructed, the large sunk cost will tend to force further water development and diversions from the Upper Colorado River area. If Union Park prevails, the Upper Gunnison will receive its fair share of the state's future water conservation projects.

We are hopeful of a favorable response to this letter, as we believe strongly in a spirit of cooperation to achieve the most cost effective water systems for the people of Colorado. If in a few days an indication of cooperation is not apparent, we will unfortunately be forced to seek whatever remedies are available to insure compliance with the intent of federal legislation.

Sincerely,



Allen D. (Dave) Miller
President

ADM/bm

4 Attachments

SUMMARY OF RESEARCH REGARDING GUNNISON-ARKANSAS PROJECT
March 21, 1986
Bureau of Reclamation, Grand Junction, CO

The Gunnison-Arkansas Project appears to be grounded in Bureau projects and studies of the late 1930's and the 1940's according to the Bureau's own history of past investigations. WPA funding in 1935 marked the beginning of the study of water supply in Colorado, and out of this "some areas and projects, including the Gunnison-Arkansas Project, warranted further investigation...Investigations on the Western Slope were started about 1936...In June 1940, a comprehensive reconnaissance survey was started to determine the possibilities for optimum Gunnison-Arkansas Project development. Surveys were begun in the Gunnison Basin in the fall of 1943 to obtain preliminary data on existing water use and control facilities, reservoir and dam sites, hydroelectric power sites, and potential trans-mountain diversion sites." The chronology associated with this project indicates a long-standing interest on the part of the Bureau of Reclamation.

For organizational purposes, the data examined may be considered in four sections:

1. Interim Report, Gunnison-Arkansas Project, Colorado. 13 volumes; June 1948: Project Planning Report No.7-8a.49-0. U.S. Dept. of the Interior, Bureau of Reclamation. See the attachment, "List of Supporting Appendix Reports," for an index of volumes contained in this edition of data regarding the project.

Contained in this report are two plans:

A. a minimum plan called "Initial Development";

B. an expanded plan called "Maximum Gravity Diversion."

The content of the report is heavily weighted on the "Initial Development" phase which concerns the Roaring Fork River Basin and specifically the Fryingpan River diversion to the Arkansas River. The Gunnison River Basin figures in the Maximum Gravity Diversion phase of the project.

2. Interim Report, Gunnison-Arkansas Project, Colorado. 16 volumes; September 1949: Project Planning Report No.7-8a.49-1. U.S. Dept. of the Interior, Bureau of Reclamation. Please see the attachment, "List of Supporting Appendix Reports," for an index of volumes contained in this other edition. This series of volumes along with a supplement entitled Initial Development Gunnison-Arkansas Project, Special Report, were presented to the Governor of Colorado who forwarded the project to the Colorado Water Conservation Board.

Atch. 1

page 2

The bulk of the report is still strongly weighted to phase 1 of the project except for Appendix Q- Alternative Plans which focuses on the Maximum Gravity Diversion phase and even embellishes on that.

3. Report of the Policy and Review Committee (of the Colorado Water Conservation Board.) June 15, 1950. This volume discusses the commentary of this body on the "Interim Report on the first stage of the proposed Gunnison-Arkansas Project." The committee concludes that a smaller project than the "Initial Phase" would not be "justifiable". It submits "Operating Principles for the Fryingpan-Arkansas Project". Note that even the name of the project is becoming ambiguous. It is suggested by some that the project be renamed "Fryingpan-Arkansas Project" to be more descriptive of its scope. This "... shall not be implied as an abandonment of their expressed intention to obtain approval of a project from the Gunnison River, nor shall approval of this provision by Western Colorado representatives be construed as any consent on their part to the authorization of a project for the exportation of water from the Gunnison River to Eastern Colorado."

4. Peripheral Data. These are assorted volumes filed with the Interim Report, Gunnison-Arkansas Project, and related to it. They are listed chronologically.

Montrose Power Investigations/Colorado. Gunnison River Dam Preliminary Estimate. September 25, 1939.

Gunnison-Arkansas Project - Colorado. Almont Dam. Very Preliminary Design and Estimate. January 3, 1946.

U.S. Dept. of the Interior, Bureau of Reclamation. White-water Unit-Colorado. Information Required for Preparation of Preliminary Designs (sic) and Estimates for Bridgeport Dam and Kannah Creek Dikes. Grand Junction, CO. Nov. 1, 1948. Includes photos, maps, topo, tables, charts, etc.

United States Dept. of the Interior/Bureau of Reclamation, Upper Colorado River. "Report on Search for Potential Reservoir Sites in the Roaring Fork Basin above the Aspen Reservoir Site." August 31, 1949.

Official Comments and Recommendations of the State of Colorado on the Initial Development, Gunnison-Arkansas Project Roaring Fork Diversion, Colorado. Aug. 7, 1951.

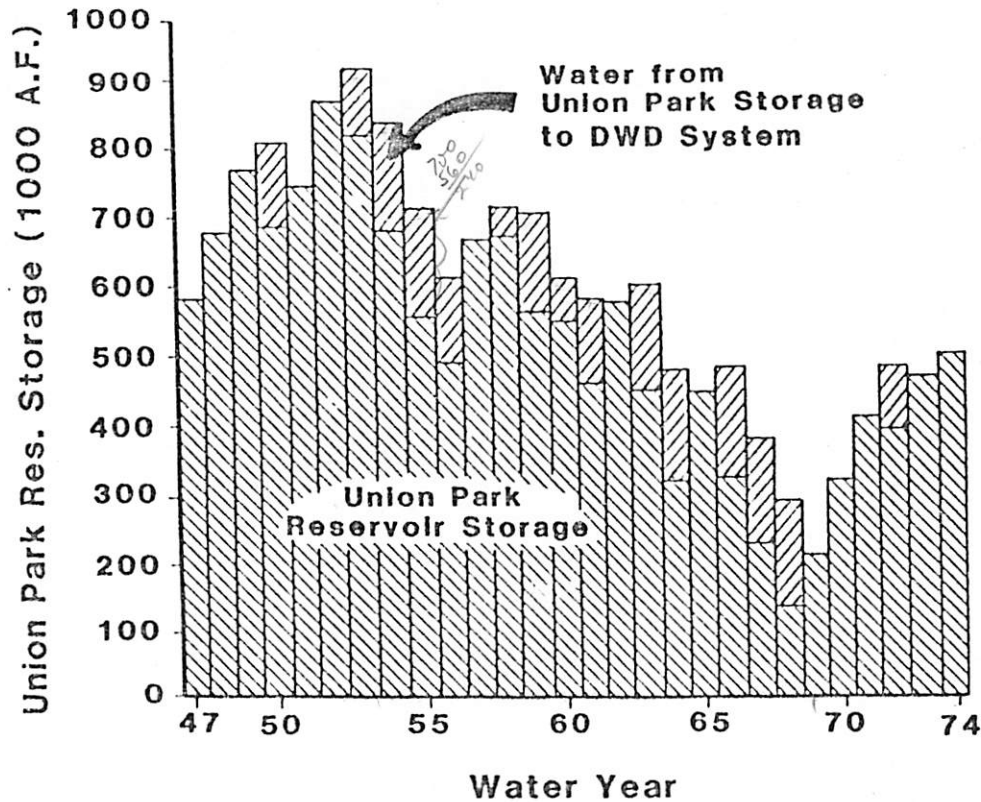
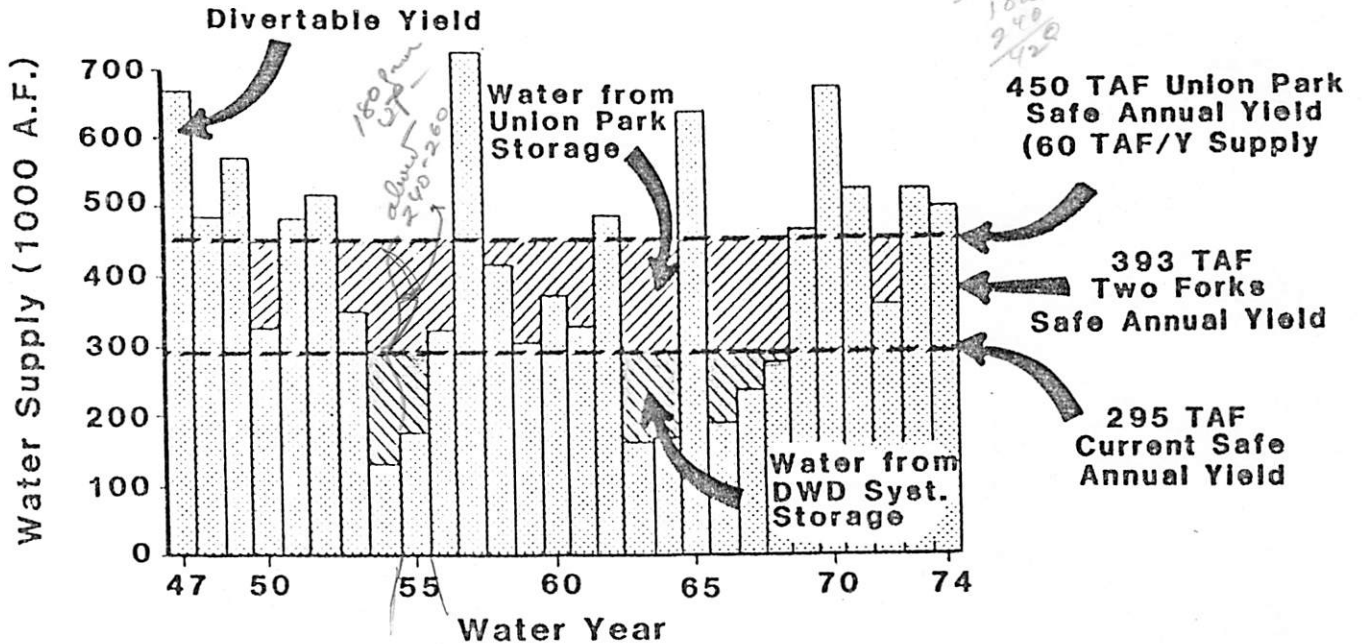
Union Park Water Supply Project

Denver Water Department

Divertible Yields & Safe Annual Yields

60,000 AF

$$\begin{array}{r} 450 \\ 240 \\ \hline 180 \\ 240 \\ \hline 420 \end{array}$$

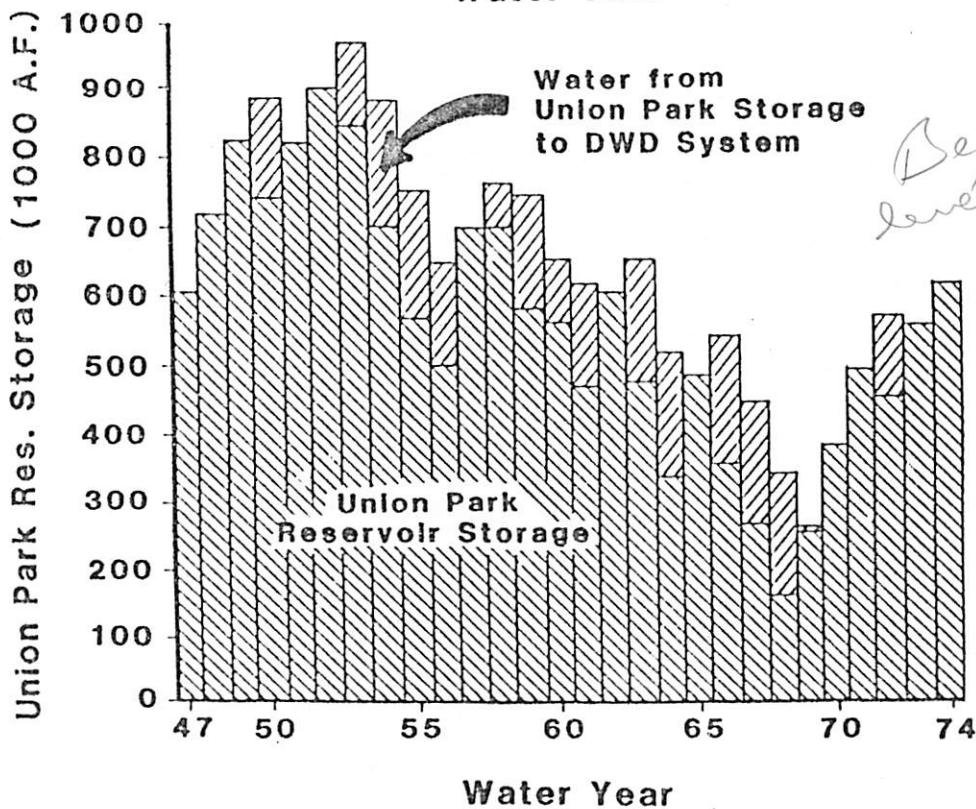
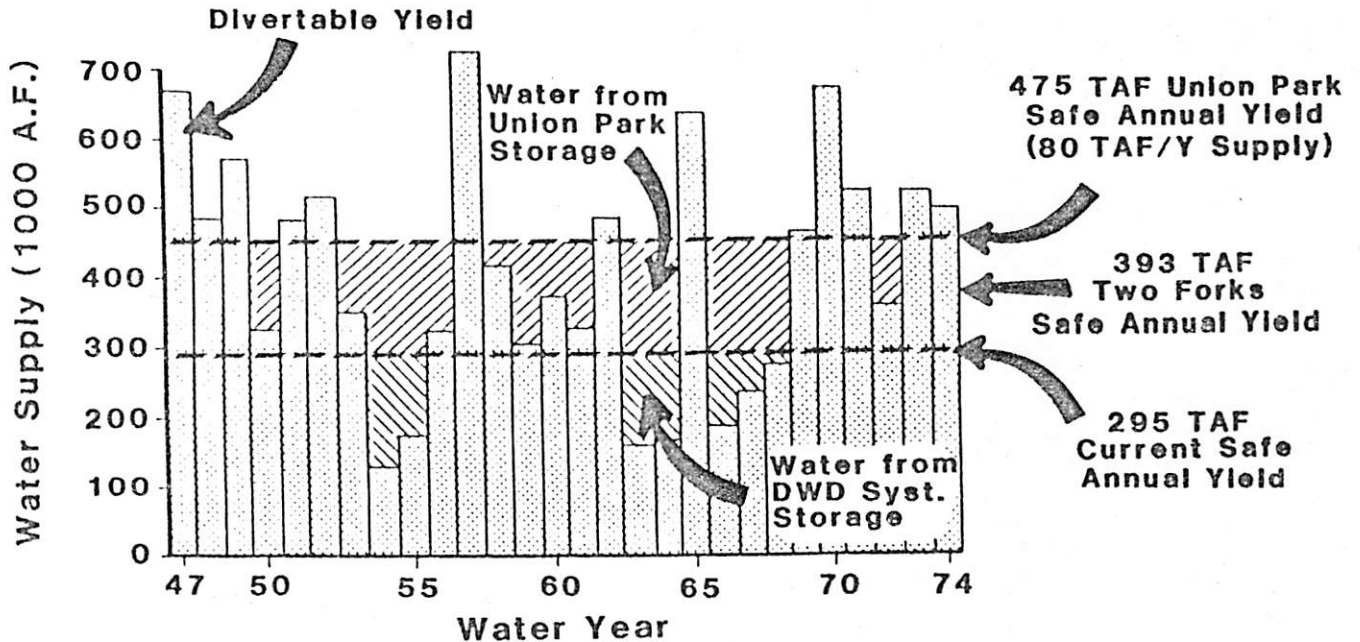


Union Park Water Supply Project

Denver Water Department

Divertable Yields & Safe Annual Yields

80,000 AF



Beginning level of reservoir is critical assumption in this exercise

UNION PARK WATER SUPPLY PROJECT SYSTEM COMPARISON

	<u>UNION PARK</u>	<u>TWO FORKS</u>	<u>COLLEGIATE RANGE</u>
Capital Cost	\$424M	\$400-500M	\$343M
Safe Annual Yield-Initial	155,000 AF	98,000 AF	53,000 AF
Capital Cost per Acre Foot	\$2700	\$4000-5000	\$6500
Annualized Cost per Acre Foot	\$230	\$340-425	\$550
Future Expansion	150,000 AF	260,000 AF	30,000 AF
Expansion Annualized Cost per Acre Foot	\$400-500	\$500-800	\$500-600
Users	Front Range West Slope	Denver Area	Denver
Environmental Impact	Minimal	Major	Moderate
Recreation	Positive	Negative	Negative

GUNNISON COUNTY PLANNING COMMISSION

AGENDA: February 20, 1987

- 9:00 a.m. -- Administrative matters/minutes
- 9:15 a.m. -- Natural Energy Resources Company,
informational updates on environmental,
feasibility, et.al. studies on the proposed
Union Park water supply project
- Comments, questions from public agency
representatives
- Comments, questions from the public
- Comments, questions, wrap-up by Planning
Commission members
- 12:00 noon -- LUNCH
- 1:30 p.m. -- Ken Norris, public hearing on Minor Impact
proposed land split on Kebler Pass near
Erickson Springs
- 2:15 p.m. -- Staff for Mark Schumacher, Three Rivers
Resort amendment to site approval application
- 2:45 p.m. -- Work session, to determine suggestions for
U.S. Forest Service's "wish list" for
recreational uses on Forest Service lands

GUNNISON COUNTY PLANNING COMMISSION

MINUTES: February 20, 1987

The Gunnison County Planning Commission held a regular meeting on Friday, February 20, 1987 in the County Commissioners' Room, Gunnison County Courthouse. All members but Linda Helken and Don Crosby were present.

Dave Miller, president of the NATURAL ENERGY RESOURCES COMPANY, was present to provide an informational update on the proposed Rocky Point pump storage project and the Union Park project.

The following people were also in attendance:

Tom Griswold, City of Aurora
Roger Fraser, City of Aurora
Rod Landwehr, Attorney, Town of Mt. Crested Butte
Perk Vickers, Gunnison Water Board
J.N. McDermott, Gunnison Water Board
Paul Taramarcas, Gunnison Water Board
Steve McCall, Bureau of Reclamation
Gordon Lind, Bureau of Reclamation, Salt Lake City, Utah
Brent Uilenberg, Bureau of Reclamation, Grand Junction
David Anderson, District 10 Planning Commission
Bill Trampe, Upper Gunnison River Water Conservation Dist.
Jim Hokit, Uncompagrhe Water Users, Montrose
Frank Coleman, Western State College
Michael McHugh, Colo. Joint Review Process
Tom Henry, Jr., Colo. Division of Wildlife
Martin Nielson, National Park Service, Curecanti
K. T. Lund, Gunnison Country Times
Rick Sherman, Division of Wildlife
Dee Blacklock, City of Gunnison
Lynn Cudlip, 3-C Water Lab
Mark Elder, Gunnison County Sanitarian
Mike Rock, Gunnison County Manager
Bill Nesbitt, Gunnison City Council
L. Richard Bratton, Attorney, Upper Gunnison River Water Conservation District
Jack Sage, Bureau of Reclamation
Neil Chapin, Bureau of Reclamation, Montrose
David Leinsdorf, Chairman, Gunnison County Commissioners
Rikki Santarelli, Gunnison County Attorney
Terry Reed, Bureau of Land Management, Gunnison
Robert Arnold, Gunnison Water Board
David D. Ruff, U.S. Forest Service, Gunnison

Gordon Ferguson, Almont homeowner; Gunnison Angling Society;
Trout Unlimited
Laura Anderson, Crested Butte Chronicle-Pilot

Joanne started the meeting off by giving a brief history of the county's dealings with NECO. The Planning Commission first met with the company in May, 1985; no land use change application has been filed as yet.

Miller explained that what NECO is considering is a conduit 42 miles long from a reservoir that would sit 800' higher than Taylor Park Reservoir, involving a tunnel 12 miles long through the Continental Divide into Cottonwood Creek, a pipeline under the Arkansas River and up the other side, going into a flume, another short tunnel, and another flume into Denver's Antero Reservoir. He said they like to think they are just 42 miles from Denver by gravity conduit; the system is based entirely on gravity flow.

The reservoir NECO refers to would be approximately 900,000 square feet, slightly smaller than Blue Mesa Lake.

NECO estimates construction costs for the Union Park project to be \$400,000,000 and the Rocky Point project to be \$500,000,000.

NECO's contractors feel that this area is probably the most efficient power operation location in the country.

Miller explained that they expect to pump 30,000-40,000 acre ft. of water during spring run-off. The water would be held in the Union Park reservoir until it is needed by the west slope and/or the east slope. The total holding capacity of the Dillon, Antero, Eleven Mile, and Cheesman reservoirs is 438,000 acre feet. Union Park would add another 900,000 acre feet to that, basically tripling the capacity of the Denver system.

NECO is proposing to divert an average of 60,000 acre feet/year from the Upper Gunnison area. In dry years, they may not pump anything, and in other years, they may pump up to 140,000 acre feet into Union Park Reservoir from the Taylor Reservoir, depending on the spring run-off. Water will only be pumped when there's a surplus, according to Miller, not affecting senior water rights. NECO has agreed, in their water decree, to maintain 60,000 acre feet as a minimum stream flow.

Aurora and NECO have filed on the same water.

Union Park is to be built off-river, according to Miller; it will only be drained by Lotus Creek.

NECO believes that the Union Park, Two Forks, and Collegiate

Range projects are all competitive. A chart showing the three proposals was displayed by Miller, with Union Park shown as the most favorable in terms of capital costs (\$425 million). Miller said that their proposal is a dry-year concept, which means that they only take water in the "wet" years and hold it until it is needed on the west slope or the east slope. NECO feels that there are flaws in the Aurora proposal, since they will be diverting surplus water to the South Platte when it cannot carry or handle more water.

Regarding future expansion, Miller said that there is a substantial amount of surplus water in the Gunnison area, and on the west slope. The problem is that the water comes from heavy snow run-off which occurs during a short period of time; the reservoirs would spread out the availability of water by collecting the run-off.

NECO claims that the environmental impact of their project, compared to the Two Forks and Collegiate Range projects, will be minimal, and may even have a net positive impact. Their reasoning is that surplus water will be drawn when flooding could cause damage downstream in wet years, and even flows will be maintained in the rivers during dry years.

Miller displayed a chart showing the assets that Union Park currently has; they already have 325,000 acre feet of storage in a 1984 decree with a 1982 priority date. That storage is for power generation only, which is a non-consumptive use, according to Miller. The power generation operation does not consume any water; it is pumped uphill and released. On Dec. 31, 1986 NECO filed for the enlarged storage (900,000 acre feet) in Union Park. NECO wants to maintain their 1982 priority for water rights. They feel they can show that they've been working on this project since that time.

The diversion of the conduit to the East Slope is also part of NECO's water rights application and is still pending; it would also have the 1982 date.

Three engineering firms are working with NECO: Ebasco Services, Black & Veatch, and Harrison-Western.

One of the expansion ideas of the Union Park concept includes lateral tunnels to the East River and Quartz Creek. NECO feels an additional 45,000 acre feet could be brought into the system through these tunnels. Miller explained that construction costs would be fairly high, but the cost per acre foot is comparable to Two Forks.

Miller concluded his briefing, and asked if there were questions.

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Perk Vickers asked if Miller was saying that, if NECO builds the Union Park project, Two Forks will not be built. Miller answered that their project is an alternative to Two Forks, and there's no reason to have Two Forks if NECO's project is built. Miller also added that NECO had released a letter two days ago to the Denver Water Board, the Metro Water Providers, and the Corps of Engineers asking for a delay on the Two Forks public hearing scheduled for next week. NECO's reasoning for this is that the Nat'l Environmental Protection Agency requires analysis and comparisons of all viable alternatives, and the Union Park concept has been available for a long time, according to Miller.

Dick Bratton asked what the cost was for the expansion tunnels to the East and Tomichi Rivers. Miller replied that the total cost would be \$290 million.

There was a question of what the minimum stream flows in the Taylor River would be. Miller said that it varies by the month, and involves complicated hydrology. He said that it wouldn't hurt the rafting or fishing, and in fact, the 60,000 acre feet average of water NECO figured as a minimum stream flow was considered by some people to be too high for good wading.

Miller said that the existing dam and spillway at the Taylor Reservoir were not designed for a 100-year flood and need to be improved. As part of their power project, NECO is planning a multi-level outlet works that would pull water out of the reservoir at any level. He said they would release the warm water which would double the growth rate of fish downstream.

Rikki Santarelli asked what effect the pumping activities of both Rocky Point and Union Park would have on the level of the Taylor Reservoir. Miller replied that the daily fluctuations at Rocky Point (depending on how much water is in the reservoir when water is released to the pumped storage operation) would be 2', if the reservoir is full; if the reservoir is "down a ways," the pumping would reduce the reservoir level by 3'.

Dick Bratton brought up the issue of transporting the power; he said he disagrees with Miller on how easy it will be to transport the power, and considers it a major issue. The other issue is environmental, and getting the power out of Taylor Park as compared with other projects that are being considered in eastern Colorado. Another issue is the amount of water actually available in the Upper Gunnison Basin with all the demands being placed on it.

Bratton said that Aurora had been requested at the Commissioners' meeting Tuesday (Feb. 17) to consider delaying active litigation on their water rights application until the UGRWCD is further along in the Upper Gunnison study, and Bratton said "we'd" ask the same thing of NECO if they're interested in

complying. Bratton said that there are many factors involved, and asked if NECO would consider postponing proceeding with their water filing until the study is further along or completed.

Miller replied that NECO is still open to negotiating and discussing the issues that Bratton raised. However, Miller said it is hard for them to sit back and wait for studies to be completed while Two Forks is pressing on.

There was a question regarding the water to be stored in Union Park; specifically, the water that NECO will store in Union Park is presently stored in Taylor Reservoir and goes to the Uncompagrhe District: how will NECO make the replacement to the Uncompagrhe District? Miller cited studies done by the Bureau of Reclamation before Blue Mesa Reservoir was constructed. He said the replacement water would come from Blue Mesa, with back-up provided through Union Park.

Another questioner asked Miller to describe the N.E.P.A. compliance process (permit decision process) as he sees it for NECO's project, independent of the decisions that may be pending on Two Forks. Miller replied that an analysis of alternatives needs to be done; what are the alternatives for providing water for whoever will be using it? NECO will be studying the same alternatives that Denver is studying now. Miller said they believe that 90% of the work has been done. He also said they feel that the real need for water is in the Denver Metro area. The N.E.P.A. requirements for Union Park are the same as for Two Forks, according to Miller.

Someone asked Miller if he thought the Denver Water Board had any impression, favorable or unfavorable, regarding the Union Park project. Miller said that a briefing scheduled for last week between NECO and the Denver Water Board was cancelled. NECO says construction will not start until they have major users, which is the purpose of meeting with the Denver Water Board. NECO is negotiating now with major users.

NECO would still go through with the Union Park power generation project even if Two Forks is approved/completed. It is NECO's opinion that Two Forks can be completed in 4-5 years.

Laura Anderson asked where the tunnel would come out of the East River, and how it would be done. Miller said that it could be either a diversion point or a reservoir, and will be right where two creeks come together. Anderson asked for the specific location of the two creeks; Miller wasn't sure, but said that the site had to be at approximately 9,400' elevation. Bill Trampe thought that Miller was talking about the Copper Creek area near Gothic. Miller estimated that construction of that project would be 25 years away.

David Leinsdorf said that permits will be required by the county from Aurora and NECO, and the county will push for a complete joint review process.

NECO's FERC application will be submitted next September, according to Miller; construction would start 3-4 years after that.

Fred Holbrook asked if NECO's current application to the Water Court (or the old decree that they already have for the smaller reservoir) specifically includes putting water back into the West Slope drainage. Miller replied that their application describes the dry-year concept, with the idea of supplying water to users on both slopes. They already have a contract with the City of Gunnison to provide water and power to the city.

Fred then asked the wildlife representatives in the audience if they thought that Union Park was a good area to fill with water. DOW representatives said that there are migration routes and calving in that area. They do anticipate some major problems, because there is a major sheep herd and elk herd right in the middle of the proposed reservoir. Wildlife people are waiting for the EIS to be completed before making any final decisions.

Dick Wingerson summarized the meeting, noting two major points: 1) A large "bucket" of water on top of the Continental Divide is very valuable; and 2) Many groups want the same water. Dick reiterated that Gunnison County still doesn't have a proposal from NECO in the form of a land use change application, and that many processes will be triggered once the county does receive an application.

Dave Ruff of the Forest Service said that they had a fairly long list of concerns regarding NECO's project if it should be developed. The Forest Service had sent NECO a list of their concerns. Presently, NECO has a permit with the USFS to conduct field studies on the Rocky Point Project. Last summer (1986) was the first year that any field studies and exploration were done by NECO; additional work is planned for this summer.

There were no further questions or comments, and Dick thanked Dave Miller and those in attendance for coming.

Les Rumberg and Fred Holbrook were seated as voting members. Dora Mae moved and Les seconded a motion that the Planning Commission minutes of February 6, 1987 be approved as corrected. The motion passed unanimously.

The public hearing for KEN NORRIS, regarding a proposed land split on Kebler Pass near Erickson Springs, was opened. Mr. Norris was present, and presented registered mail return receipts for the file as proof that adjacent landowners had been notified of the hearing.

Dick noted that an affidavit showing that the hearing notice had been published was in the file. Joanne noted that she had received three phone calls from members of the Kaslo family stating their opposition to the land split.

Joanne recommended that the Planning Commission take no action on this proposal until the Environmental Health Board has a chance to review it, since the split would create two parcels, each being less than an acre. Proposals for septic systems on parcels of less than one acre must be reviewed by the Environmental Health Board. The commission agreed to wait to hear the decision by the health board.

The hearing was closed.

The amendment to the site approval application for Three Rivers Resort was presented. Les moved and Dora Mae seconded a motion that the Planning Commission sign the application with the condition that the lines be sized to tie onto a central system if that should be effected.

MOTION PASSED unanimously.

Next on the agenda was a work session to determine suggestions for the U.S. Forest Service's "wish list" for recreational uses on Forest Service lands. The following list was developed, and Joanne was asked to pass it on to Jim Paxon at the Forest Service.

- Concessionaire program designed to encourage private landowners to develop RV and camping facilities under the aegis of the Forest Service, and to be monitored but not maintained by the Forest Service.
- Tie in to Colorado State trails system.
- Back-country hut system for x-country skiers; to tie in with identified x-country ski trails.
- Nature hikes of varying degrees of difficulty, identifying wildlife, vegetation, etc.

- Expansion (regeneration ?) of YCC program for young people to spend summers here building trails, fences, etc.
- Preservation of an old mining site and facilities, accessible by public (on nature hike, etc.).
- Expand program of working with private landowners to improve fisheries as well as signage to lessen trespass problems.
- Loop trails; identify new areas for complete trails to avoid dead-ending.
- Support obliteration of roads which have been cut in for timber cuts.
- Signs at trailheads describing the length of the trail, conditions of trail, difficulty, allowed usage, etc.

The meeting was adjourned.

Pam Park, Planning Assistant

AGREEMENT

This Agreement, entered into this 14th day of January , 1987, by and between Natural Energy Resources Company, a Colorado corporation, with place of business at 3855 Highway 105 West, Palmer Lake, Colorado 80133 (hereinafter referred to as "NECO" or as "Seller"), and the City of Gunnison, a Colorado municipal corporation, P. O. Box 239, Gunnison, Colorado 81230, (referred to hereinafter as "Gunnison" or as "Purchaser"), WITNESSETH THAT:

A. Whereas, NECO represents that it has full, merchantable and unencumbered title to a conditional decree for water rights issued June 14, 1984, by the District Court for Water Division No. 4, State of Colorado, in Case 82CW340, to store water from the Taylor River, Lottis Creek and Willow Creek for hydroelectric purposes in a reservoir, the south abutment of which is located at a point which bears South 15° 20' 19" West 22,332.95 feet from the NW Corner of Section 21, Township 14 South, Range 82 West of the 6th P.M. in Gunnison County, Colorado; and

B. Whereas, NECO intends to file during calendar year 1986 in the office of the Clerk of the said District Court for Water Division No. 4, an application for water storage rights for municipal and transmountain purposes at substantially the same location, in the form attached hereto as Exhibit A (hereinafter referred to as "the Application" or "the Project"); and

C. Whereas, NECO represents that its agents or employees have engaged in open and notorious activities in support of the

project referred to in the foregoing paragraph B, sufficient to establish an appropriation date earlier than and a priority senior to the application filed by the City of Aurora in Case 86CW37 in said Court; and

D. Whereas, Gunnison requires a supply of municipal water in the form of stored water or water storage rights to supplement its existing water supply, and also requires a supply of hydroelectric power to supplement the electrical power presently purchased by its municipally owned electric utility; and

E. Whereas, NECO has tendered to Purchaser a certain report by Ebasco Services, Incorporated, entitled "Union Park Water Supply Project Reconnaissance Evaluation Study" dated October, 1986, which predicts a safe yield (safe yield means the average amount of consumptive use water which the project would yield over an extended period of time from the water rights referred to at paragraph B) for NECO's water rights referred to in foregoing paragraph B of about 60,000 acre feet per year, and contemplates a reservoir with capacity of at least 600,000 acre feet, together with a pipeline or conduit to Antero Reservoir on the South Platte River, with other facilities and capabilities all described in said report, upon the correctness and accuracy of which Purchaser is relying; and

F. Whereas, NECO has at present no other contracts with municipal or quasi-municipal end users of its water, and such contracts committing such purchasers to purchase some Project

water are essential to avoid possible dismissal of the Application under Colorado case law;

NOW, THEREFORE, Seller and Purchaser, in consideration of ONE THOUSAND DOLLARS (\$1,000.00) in hand paid by Purchaser to Seller, and the additional consideration and the mutual obligations recited herein, AGREE AS FOLLOWS:

1. Purchaser agrees to buy from Seller, and Seller agrees to sell to Purchaser the right to receive, in perpetuity, 1,000 acre feet of water per year of the safe yield of the Project, for a total one time purchase price to Gunnison of TWO HUNDRED THOUSAND DOLLARS (\$200,000), payable as follows: \$1,000 hereby receipted for, and the balance due in cash or certified funds upon completion of the Project to such a state of construction that it has the legal and physical capability to actually deliver such amount of water to said purchaser. This commitment to purchase shall expire 21 years from date hereof if not previously closed pursuant to paragraph 9.

2. Seller grants to Purchaser the option to purchase the right to receive in perpetuity up to an additional 2,000 acre feet per year of the safe yield of the Project for a total one time purchase price of THREE HUNDRED DOLLARS (\$300) per acre foot. Such option shall be exercised by written notice delivered to Seller no later than twenty-one (21) years from the date hereof or within six months after completion of the Project to such a state of construction that it has the legal and physical

capability to actually deliver such amount of water to Purchaser, whichever occurs sooner.

3. Seller grants to Purchaser the option to purchase up to 12,000 acre feet of reservoir storage space in the Project, beyond the space to which it is entitled by virtue of purchases of water under Paragraphs 1 and 2, at a one time purchase price of FIFTY DOLLARS (\$50.00) per acre foot of space, for storage of such water as Purchaser may wish to store therein, including by way of example and not by way of limitation carry-over of safe yield water or the conditional water storage rights decreed in Case 81CW307 in said Court. Such option shall be exercised by written notice delivered to Seller no later than twenty-one (21) years from the date hereof.

4. Seller grants to Purchaser the right to expeditiously participate in any expansions of the Project beyond the water rights applied for in the Application attached hereto, on an equal basis with the most favored other participants, for up to five per cent (5%) of the additional water rights, storage space and other facilities of such expansions. These rights of participation are agreed to be effective and to vest immediately upon execution hereof; they are not options.

5. Any water purchased hereunder by Gunnison, or water owned by Gunnison which is stored in the project reservoir, shall be delivered upon request to the Taylor River system at the outlet works of the project.

6. NECO grants to Gunnison in consideration of the various benefits derived from this agreement by NECO, which is acknowledged to be full and satisfactory consideration, the right to purchase as much electricity, in the City's sole determination, as the City's utility system can use within the city limits, in perpetuity, at a cost of one-half of the lowest capacity price charged by any of Gunnison's other suppliers at the time, including purchases that Gunnison makes from the federal government. Gunnison shall at its sole option furnish or pay for at NECO's cost the energy necessary to pump the water into the upper reservoir from which its said power will be generated. Gunnison's power shall be metered and delivered at the low voltage side of the NECO substation, and it shall be the responsibility of Gunnison to arrange necessary wheeling contracts or alternate delivery methods. The right to purchase power under this paragraph is agreed to be effective and to vest immediately upon execution hereof; it is not an option even though it is recognized by the parties that such power cannot as a practical matter be purchased by Gunnison until a future date upon completion of the first stage of the hydroelectric works of the Project and expiration, termination, or renegotiation of the City's presently existing power purchase obligations.

7. All obligations of Purchaser except the earnest money payment hereunder are contingent upon the entry of a final decree pursuant to the Application, after conclusion of appeals in that or related litigation, establishing that the water rights

of the Project are senior to those sought by the City of Aurora in said Case 86CW37 in the District Court for Water Division No. 4, and are also senior to any other water storage right of over 200 acre feet for which application was filed in said Court in calendar year 1986, or which relates back to calendar year 1986 under C.R.S. 37-92-306.1 or otherwise.

8. All obligations of Purchaser hereunder are also contingent upon defeat or subordination by NECO of a sufficient quantity of conditional water rights to establish that the rights to water of Purchaser under paragraphs 1 and 2 hereof are within the safe yield of the Project. However, NECO shall not attempt to defeat or subordinate 17,000 AF of the water storage rights decreed to the City of Gunnison in Case 81CW307 at such reservoir sites decreed in that case which Gunnison shall select.

9. Closing of purchases hereunder shall occur at the municipal offices of the Purchaser within a year after the occurrence of the condition described in paragraph 1, or within a year after the exercise of options described in other paragraphs, as the case may be, or at such earlier date as Purchaser may request. At closing, upon payment or tender as above provided and compliance with the other terms and provisions hereof, Seller shall execute a good and sufficient warranty deed or other and equivalent evidence of ownership to Purchaser, conveying the perpetual right to receive water, or the water storage space, as the case may be, free and clear of all liens, encumbrances, or

obligations other than regular payments of Purchaser's share of operating and maintenance charges.

10. The purchase prices do not include regular operation and maintenance expenses. Any operation and maintenance expenses must be reasonably related to project facilities necessary to deliver water to each Purchaser, and shall be allocated among the users of such facilities according to their use. Such expenses may include replacement costs of limited life-time items which are associated with the operation of the project facilities used by Purchaser, such as moving parts and bearings of pumps, generators, valves and the like, but not to include reconstruction of the dam or the conveyance facilities, and not to include duplication of costs which have been charged under other accounts, nor to include retirement of debt.

11. Title shall be merchantable in Seller as of closing. If title to any water, water right or storage space is not merchantable, then at the option of the Purchaser this contract shall be considered void and of no effect, or Purchaser may proceed under paragraph 10.

12. This contract shall be filed with the Water court as an appendix or exhibit to the Application, and the contractual rights of Purchaser hereunder are agreed to be a vested interest in all of the benefits of the Application and the Application shall so provide. Nevertheless, NECO shall save Purchaser harmless from all costs, liabilities and burdens of pursuing the Application and related litigation to completion, completing the

project and meeting NECO's other obligations hereunder, which NECO agrees to undertake and carry out promptly, diligently and in good faith.

13. It is agreed that, because the present water statutes do not provide for an entry of appearance at the inception of a water case, Gunnison may file a Statement of Opposition to the Application, not for the purpose of hostility to the Application or the Project but for the purpose of being a party to such proceedings in order to be able to protect Gunnison's water rights.

14. This Agreement imposes on Purchaser no obligation to assist NECO in litigation, administrative proceedings, project financing, or otherwise than as specifically provided herein. Purchaser is not a co-applicant in the Application.

15. A counterpart of this Agreement may be recorded by any party hereto. This Agreement may be executed with one or more counterpart signature pages.

16. Seller shall not encumber or suffer a lien to remain recorded upon any of the rights to receive water, water, water storage space or electric power as to which Purchaser has any interest hereunder or which Purchaser has the right to acquire by exercise of an option hereunder. Any security interest given by Seller to finance the project, or otherwise, shall be subordinate and junior to the rights of Purchaser under this contract.

17. Seller shall regularly keep Purchaser informed of its corporate status, encumbrances upon the Project, other parties to whom water or storage space is sold, contracted or

optioned, and progress and status of construction of the project.

18. Time is of the essence hereof. If any payment due hereunder is not paid, honored or tendered when due, or if any other obligation hereunder is not performed as herein provided, then the non-defaulting party may (1) elect to treat this agreement as terminated, in which case all payments and things of value received hereunder shall be returned to the non-defaulting party and it may recover such damages as may be proper, or (2) elect to treat this Agreement as being in full force and effect and the non-defaulting party shall have the right to an action for specific performance or damages, or both.

19. Each party represents that the persons executing this Agreement on its behalf have been regularly authorized to do so by that entity's governing Board or Council, as the case may be.

20. NECO holds harmless and shall indemnify Purchaser from any liability, attorney fees, cost or expense arising from injury to persons or property in the construction or operation of the project. NECO shall conform to all applicable construction and safety regulations, and shall maintain in force liability insurance or bonding suitable, appropriate and customary for the size, scope and status of the Project, including sufficient insurance to obtain the maximum benefit from CRS 37-87-104 or successor statutes. None of the deeds, instruments or documents contemplated or provided herein are intended to transfer to the Purchaser such a degree of control over the physical structures or project facilities as to make Purchaser or its agents "owners"

in the sense of CRS 37-87-104.5 and successor or similar statutes or cases.

21. Any notices which are required, desirable or related to this Agreement shall be provided in writing to the parties at the address recited above, or at such changed address as to which the parties may notify each other from time to time. Notice to NECO may also be provided in writing to its registered agent. Any notice given by first class mail shall be deemed effective three days after mailing; notices by methods which provide written evidence of delivery such as certified mail with return receipt or personal service shall be deemed effective upon actual delivery.

22. NECO agrees that any arrangements involving transfer to another entity of any of NECO's rights, title or interest in or needed to carry through the Application or Project will be subject to this Agreement and that NECO will obtain a binding agreement from the transferees under which the transferees will be legally bound by the undertakings and agreements of NECO hereunder.

23. NECO agrees that any sale, assignment or transfer in whole or in part of any of its interest in the Application or Project shall be subject to prior written approval by Purchaser, which shall not be unreasonably withheld provided the transferee has the technical and financial capability to pursue the Project.

24. All of the benefits and obligations of this agreement shall accrue to and be binding upon the assigns or successors in

Interest of each of the parties hereto, whether by merger, reorganization, sale, assignment or otherwise.

25. Seller has contemporaneously entered into a substantially similar Agreement with Parker Water and Sanitation District ("Parker"). The higher cost of water to Parker in that agreement reflects and includes the capital cost of delivering Parker's water to Antero Reservoir. However, in times of shortage Parker and Gunnison shall have equal priorities for the available water in each category up to the amount to which each is entitled.

26. This Agreement constitutes the entire agreement between the Seller and the Purchaser, and upon execution hereof, any provisions of any agreement which have not been expressly incorporated herein shall be deemed null and void and of no effect. No oral agreement may modify this Agreement. All modifications or amendments shall be in writing signed by both the Seller and the Purchaser.

Signed and executed the day and year first above written.

ATTEST:
Maura S. Hicks
City Clerk

CITY OF GUNNISON
By Bob Decker
Bob Decker, Mayor

ATTEST:
By Phyllis Summer
Secretary

NATURAL ENERGY RESOURCES COMPANY
By Allen D. Miller
Allen D. Miller, President

STATE OF COLORADO)
) SS.
COUNTY OF GUNNISON

The foregoing instrument was acknowledged before me this 14th day of ~~December~~ December, 1989, by Bob Decker as Mayor of the City of Gunnison, a municipal corporation.

My commission expires: 12/15/89

David B. Newman
Notary Public
516 A 7th St.
Gunnison CO 81230

STATE OF COLORADO)
) SS.
COUNTY OF DOUGLAS

The foregoing instrument was acknowledged before me this 15th day of ~~December~~ December, 1989, by Allen D. Miller as President of Natural Energy Resources Company, a Colorado Corporation.

My commission expires: _____

Jack E. C... ..
Notary Public
1549 Woodman Dr
Mon, Co 80132