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IN THE SUPREME COURT  
OF THE  
STATE OF COLORADO  
CASE NO. 27714

FILED IN THE  
SUPREME COURT  
OF THE STATE OF COLORADO

OCT 16 1978

*David W. Bazina*

A-B CATTLE COMPANY, et al., )  
 )  
 Plaintiffs, )  
 )  
 Vs. )  
 )  
 THE UNITED STATES OF AMERICA, )  
 )  
 Defendant. )

CERTIFICATE TO THE SUPREME  
COURT OF THE STATE OF COLORADO  
ON REHEARING

---

ANSWER BRIEF OF PLAINTIFFS  
A-B CATTLE COMPANY, et al.

---

Leo S. Altman (Reg No. 942)  
501 Thatcher Building  
Pueblo, Colorado 81002  
Telephone No: 1-303-545-7235  
Attorney for the Bessemer  
Irrigating Ditch Company

Glenn G. Saunders (Reg. No. 180)  
John M. Dickson (Reg. No. 186)  
Michael L. Pederson (Reg. No. 7905)  
802 Capitol Life Center  
225 East 16th Avenue  
Denver, Colorado 80203  
Telephone No: 1-303-861-8200  
Attorney for all Plaintiffs  
except the Bessemer Irrigating  
Ditch Company

October, 1978

TABLE OF CONTENTS

I. Statement of Facts and Summary of the Argument . . . . . 1

II. Argument . . . . . 7

    A. A water right is a usufructuary right. As a right to use, its extent, nature and value are measured by and depend upon the way an appropriator uses his water right. Consequently, the impairment of a water right, by a reduction in the very use for which the appropriation was made and has been used, constitutes a taking for which just compensation is required. . . . . 7

    B. Maximum utilization does not require or contemplate the destruction of one persons water rights for the benefit of others without just compensation. The destruction of existing uses for the purpose of transferring a portion of the benefit thereby lost to others is not maximum utilization. . . . 27

    C. This is a water right, not a water pollution case . . . . . 55

    D. Miscellaneous . . . . . 61

III. Relief Requested . . . . . 64

TABLE OF AUTHORITIES

Colorado Constitution,  
Article XVI,  
Section 5. . . . . 2, 7

Colorado Constitution,  
Article XVI,  
Section 6. . . . . 2, 7, 22

C.R.S. 1973,  
25-8-10 et. seq.. . . . . 56, 58  
25-8-103 . . . . . 57  
25-8-506 . . . . . 58  
37-80-120. . . . . 9, 27, 36, 45  
37-80-120(2) . . . . . 28  
37-80-120(3) . . . . . 12, 18, 27, 28, 58  
38-80-120(4) . . . . . 28  
37-92-101, et seq.. . . . . 9, 36, 45  
37-92-305 . . . . . 27, 36  
37-92-305(5) . . . . . 12, 18, 27, 28, 58  
37-93-101 . . . . . 17  
37-93-101, et seq.. . . . . 17  
37-93-105(1)(f)(I)(B). . . . . 17, 58

Colorado Session Laws, 1879, § 38, P. 106 . . . . . 22

Reclamation Act of 1902, c. 1093, 32 Stat. 390  
(codified at 43 U.S.C. § 371, et seq.) . . . . . 12, 28

Reclamation Act of 1902, c. 1093, § 8,  
32 Stat. 390 (codified at 43 U.S.C. § 372). . . . . 28

Rules of Court of Claims, Rule 65 . . . . . 63

United States Constitution, Amendment V . . . . . 10

28 U.S.C. § 1346 . . . . . 39, 47  
33 U.S.C. § 1751 . . . . . 56, 58  
33 U.S.C. § 1751 . . . . . 57

43 Stat. 702, 43 U.S.C. § 412 . . . . . 40

TABLE OF CASES CITED

-COLORADO-

Baker v. City of Pueblo, 87 Colo. 489, 289 P.2d 603(1930) . . . . .	20
Bates v. Hall 44 Colo. 360, 98 P. 3(1908). . . . .	36
Joseph W. Bowles Reservoir Co. v. Bennett, 92 Colo. 16, 18 P.2d 313(1932). . . . .	38
Brighton Ditch Co. v. Englewood, 124 Colo. 366, 237 P.2d 116(1951) . . . . .	25
Cache La Poudre Water Users Association v. Glacier View Meadows, Colo. _____, 550 P.2d 288(1976) . . . . .	35
Chicago, Burlington and Quincy Railroad v. Public Utilities Commission, 69 Colo. 275, 193 P. 726(1920) . . . . .	29
City of Boulder v. Boulder and Left Hand Ditch Co., Colo. _____, 557 P.2d 1182, (1976). . . . .	30
City of Colorado Springs v. Bender, 148 Colo. 458, 366 P.2d 552(1961) . . . . .	38
City of Colorado Springs v. Yust, 126 Colo. 289, 249 P.2d 151(1952) . . . . .	35, 36
City of Thornton v. Farmers Reservoir and Irrigation Co., Colo. _____, 575 P.2d 382(1978). . . . .	23
Coffin v. Left Hand Ditch Co., 6 Colo. 443(1882) . . . . .	4, 11
CF&I Steel Corp. v. Rooks, 178 Colo. 110, 495 P.2d 1134 (1972) . . . . .	26
Colorado Milling & Elevator Co. v. Larimer & Weld Irrigation Co., 26 Colo. 47, 56 P. 185 (1899) . . . . .	8, 20
Combs v. Agricultural Ditch Co., 17 Colo. 146, 28 P. 966(1892) . . . . .	12
Combs v. Farmers' High Line Canal and Reservoir Co., 38 Colo. 420, 88 P. 396(1907) . . . . .	13

Denver v. Fulton Irrigating Ditch Co., 179 Colo. 47, 506 P.2d 144 (1972) . . . . .	56
Enlarged Southside Irrigation Ditch Co. v. John's Flood Ditch Co., 120 Colo. 423, 210 P.2d 982(1949) . . . . .	20
Faden v. Hubbel, 93 Colo. 358, 28 P.2d 247(1933) . . . . .	17
Farmers Highline Canal and Reservoir Co. v. City of Golden, 129 Colo. 575, 272 P.2d 629(1954). . . . .	14
Farmers' High Line Canal & Reservoir Co. v. Wolf, 23 Colo. App. 570, 131 P. 291(1913) . . . . .	23
Farmers Irrigation Co. v. Game and Fish Commission, 149 Colo. 318, 369 P.2d 557(1962). . . . .	14, 16
Fellhauer v. People, 167 Colo. 320, 447 P.2d 986(1968). . . . .	30, 31
Ft. Collins Milling & Elevator Co. v. Larimer & Weld Irrigation Co., 61 Colo. 45, 156 P.2d 140, (1916). . . . .	7
Game and Fish Commission v. Farmers Irrigation Co., 162 Colo. 301, 426 P.2d 562(1967). . . . .	15
Green v. Chaffee Ditch Co., 150 Colo. 91, 371 P.2d 775(1962). . . . .	21
Hallenbeck v. Granby Ditch and Reservoir Co., 160 Colo. 555, 420 P.2d 419(1966). . . . .	23
Highland Ditch Co. v. Union Reservoir Co., 53 Colo. 483, 127 P. 1025(1912) . . . . .	17
Kelly Ranch v. Southeastern Colorado Water Conservancy District, Colo., <u>550</u> P.2d <u>297</u> (1976) . . . . .	35
Knapp v. Colorado River Water Conservation District, 131 Colo. 42, 279 P.2d 420(1955) . . . . .	14

Larimer County Reservoir Co. v. People, 8 Colo. 614, 9 P. 794(1886) . . . . .	20
Mannon v. Farmers' High Line Canal and Reservoir Co., 145 Colo. 379, 360 P.2d 417(1961) . . . . .	36
Middelkamp v. Bessemer Irrigating Ditch Co., 46 Colo. 102, 103 P. 280(1909) . . . . .	3, 32, 33
Monte Vista Canal Co. v. Centennial Irrigating Ditch Co., 24 Colo. App. 496, 135 P. 981(1913) . . . . .	30
Mountain Meadow Ditch and Irrigation Co. v. Park Ditch and Reservoir Co., 130 Colo. 537, 277 P.2d 527(1954) . . . . .	20
Nichols v. McIntosh, 19 Colo. 22, 34 P. 279(1893). . . . .	12
North Sterling Irrigation District v. Dickman, 59 Colo. 169, 149 P. 97(1915). . . . .	33
People ex rel. Park Reservoir Co. v. Hinderlider, 98 Colo. 505, 57 P.2d 894 (1936) . . . . .	21, 22
San Luis Valley Irrigation District v. Noffsinger Irrigation District, 85 Colo. 202, 274 P.2d 827 (1929). . . . .	33
Stricker v. City of Colorado Springs, 16 Colo. 61, 26 P. 313 (1891) . . . . .	7, 9, 10, 13, 24, 45
Trinchera Ranch Co. v. Trinchera Irrigation Co., 83 Colo. 451, 266 P. 204(1928) . . . . .	23
Vogel v. Minnesota Canal and Reservoir Co., 47 Colo. 534, 107 P. 1108(1910). . . . .	25
Wheeler v. Northern Colorado Irrigation Co., 10 Colo. 582, 17 P. 487 (1888) . . . . .	12

White v. Nuckolls,  
 49 Colo. 170,  
 112 P. 329(1910) . . . . . 20

Woods v. Sargent,  
 43 Colo. 268,  
 95 P. 932 (1908) . . . . . 13

-FEDERAL-

Akin v. United States,  
 424 U.S. 800,  
 47 L.Ed.2d 483,  
 96 S.Ct. 1236(1976). . . . . 45

California v. United States,  
 \_\_\_\_\_ U.S. \_\_\_\_\_,  
 \_\_\_\_\_ L.Ed.2d \_\_\_\_\_,  
 98 S.Ct. 2985(1978). . . . . 45

Dugan v. Rank,  
 372 U.S. 609,  
 10 L.Ed.2d 15,  
 83 S.Ct. 999(1963) . . . . . 47

Kansas v. Colorado,  
 206 U.S. 46,  
 27 S.Ct. 655 (1906). . . . . 31

Schodde v. Twin Falls Land and  
 Water Co.,  
 224 U.S. 107,  
 56 L.Ed. 686,  
 32 S. Ct. 470(1911). . . . . 34, 35, 36, 38

United States v. District Court for  
 Eagle County,  
 401 U.S. 520,  
 28 L.Ed.2d 278,  
 91 S.Ct. 998(1971) . . . . . 45

United States v. District Court for  
 Water Division No. 5,  
 401 U.S. 527,  
 28 L.Ed.2d 284,  
 91 S.Ct. 1003(1971). . . . . 45

United States v. Gerlach Livestock Co.,  
 339 U.S. 725,  
 94 L.Ed. 1231,  
 70 S.Ct. 955(1950) . . . . . 23, 28, 53

United States v. Martin and DeBerard  
 Cattle Co.,  
 267 F.2d 764(10th Cir. 1959) . . . . . 39, 62

United States v. Northern Colorado  
 Water Conservancy District,  
 449 F.2d 1 (10th Cir. 1971). . . . . 39

United States v. Northern Colorado Water  
 Conservancy District,  
 No. 78-1378(10th Cir. 1978). . . . . 37



-OTHER STATES-

Arkoosh v. Big Wood Canal Co.,  
 48 Idaho 383,  
 283 P. 552 (1929). . . . . 49

In re Water Rights of Deschutes  
 River and Tributaries,  
 Or.  
 286 P. 563(1930) . . . . . 36

-OTHER AUTHORITIES-

E.T. Bradford and E.A. Jarecki, Paper Presented  
 to the Sixth Congress of the International  
 Commission on Irrigation and Drainage. . . . . 49

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 Interior, Design of Small Dams (1977). . . . . 56

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 Investigation North Platte Project,  
 Wyoming - Nebraska (1963). . . . . 50, 51

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 gets help from U.S.,  
 September 15, 1978, p. 59. . . . . 52

Scher, How They Tricked Mother Nature at  
 Flaming Gorge,  
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 (July 1, 1954 - June 30, 1976) . . . . . 48

I. STATEMENT OF FACTS AND SUMMARY OF THE ARGUMENT

Pursuant to Colorado Appellate Rule 21.1, the following question of law was certified by the Court of Claims to the Supreme Court of the State of Colorado:

Under Colorado law, does the owner of a decreed water right to divert and use water from a natural stream have a right to receive water of such quality and condition, including the silt content thereof, as has historically been received under that right?

The Court of Claims submitted a very detailed statement of facts to accompany the question which was based on a stipulation by the parties (Pl. 2-13).

The statement of facts contained the following:

10. The substitution of clear water from Pueblo Dam for the stream water with silt as diverted from the river has had certain adverse effects on the Bessemer Ditch system and the lands irrigated from the ditch. The silt in the water tended to seal the bed and banks of the ditch. Clear water leaks through the bottom and sides of the ditch in greater volume than silty water. More of the water passing the Bessemer Ditch gauging station about six miles below the original diversion point of the ditch seeps out of the bottom and sides of the ditch so that less of the diverted water reaches the points of delivery to Plaintiffs. There is an increase in the amount of aquatic vegetation growing in the ditch and the laterals. There has been an increase in erosion of the ditch and the laterals in places and sloughing off of material from the sides of the ditches into the bottom. There has been more seepage from the ditch into basements through the Pueblo reach of the ditch. When applied to land for irrigation, clear water does not spread as far as silty water. (Pl. 9)

The parties agree that the adverse affects described above have occurred. The United States and Bessemer disagree as to the extent thereof. See Disputed Facts, Pl. W. However, the United States has admitted in the Affidavit of Larry R. Dozier, supplied to this Court as an attachment to the United States' Answer Brief, that there has been a reduction of water delivery due to the increased seepage of between 5 and 10 percent of the total water supply. (Affidavit, p. 3)

The Court of Claims has asked this Court to advise it as to Colorado law where the water substituted by the United States is not of the quality which users have normally obtained and placed to use under their decrees causing the adverse affects specified above. It will be the task of the Court of Claims to quantify these adverse affects on the main ditch, in Plaintiffs laterals and on the farm. The Court of Claims will determine the damage suffered, if any, the extent of that taking and, finally, the monetary compensation therefor. Those are tasks for which the Court of Claims has been created and its procedures designed for. Whether the task be easy or difficult is not a matter of concern to this Court, Plaintiffs will be put to their proofs.

Regardless of the manner of stating the question certified, the real issue in this proceeding is whether or not the damage done to Bessemer and its water users by the Pueblo Reservoir is to be compensated, or whether those who have been injured are without any remedy. Silt is not an issue in this case. The issue is whether the appropriator of natural stream water in Colorado is entitled to damages if someone comes on the stream and makes such a radical change in that stream that he is no longer able to make use of his water rights.

No matter how extensive the briefing and argument, the matters raised here are limited in number. In Colorado the property which is subject to appropriation is the water of every natural stream. Colorado Constitution Art. XVI, § 5 and 6. Since the unilaterl acts of the United States Plaintiffs no longer receive natural stream water. They get manufactured lake water. If the particular lake involved, because of its location or some other condition, generated highly toxic and

harmful substances not present in natural stream water certainly the owner of the lake would have to rectify the condition so that the water user would get the benefit he normally derived from natural stream water. Similarly, if the manufacturer of that lake water removes a natural ingredient, turning the stream water into a toxic and harmful substance, the manufacture must take responsibility for that water.

The next basic point urged against Bessemer is that it has a wasteful diversion and delivery system. There are two parts to any system which is designed to ultimately deliver water to grow crops for agriculture. The first part is the main ditch and laterals which carry the water from the natural stream to the farm where the water can be run down rows to the plants. There is hardly a major ditch in Colorado which is lined or which does not simply run through the adjacent land to the point of delivery to the rows. The members of the Supreme Court can take judicial notice of this fact as can any one who has ever driven an automobile around the State of Colorado.

Middelkamp v. Bessemer Irrigating Ditch Company, 46 Colo. 102, 103 Pac. 280 (1909) is cited to indicate that Bessemer has had trouble with its ditch. This case was decided on admitted facts by the sustaining of a demurrer to a complaint. In that case, this Court said: "The pleadings here show this ditch was constructed in the ordinary and usual manner. The seepage is a necessary result caused by the character of the land through which the canal was, and of necessity had to be, constructed." 46 Colo. 102 at 109, 103 Pac. 280 at 282 (1909). The Court's attention is also

called to the statement of Amicus, the City of Pueblo, in their brief: "As irrigation ditches go in the Arkansas Valley, the Bessemer Ditch was a 'tight ditch' until the United States started delivering reservoir water to it in 1974."

The second part of delivering of water requires turning it down the rows where the plants are growing. The lawyers involved in this case must know very little about how their food is grown in Colorado. This is a traditional, customary and an efficient method of irrigating and has made a garden spot of what was a desert before the practice was instituted. The whole purpose of both Colorado's law and irrigation systems has been to bring about the maximum utilization of its waters. This is not some newly discovered wheel; it was invented before statehood, Coffin v. Left Hand Ditch Company, 6 Colo. 443 (1882), and is not accomplished by reducing a stream's waters natural irrigation efficiencies.

Every major diversion system in Colorado which takes from a natural stream, unless it is high in the mountains, has a sandtrap. This is not a silt trap. Sand is granular material which is not suspended in the water and which does not facilitate the movement of water as silt does. Comparisons of sand and silt simply show an ignorance of actual irrigation practices which, in any trial for damages will become quite apparent. A related fact is that it is not silt that causes harm to irrigators but too much silt. In that regard, silt is just like water, an excess of water will drown crops, yet total absence or too little of the substance and the crops will die.

The next oversight by Plaintiffs adversaries is that damages are not being tried in this court. If in truth and in fact users under Bessemer have suffered no damages, they will have no recovery. Those users who are benefited by clear water certainly cannot recover damages. The United States first states it is concerned with the magnitude of damage, about \$113 million worth, which Plaintiffs claim has been done. In the next breath, on page 2 and 7 of its Brief, the United States attempts to show that Bessemer has been benefited, not damaged. If this is the case, the Court of Claims will be competent to find the fact.

The last straw touched by Bessemer's adversaries is that if Bessemer's users can be recompensed for the injuries they have suffered, it will stop all future reclamations in Colorado. If we can't have reclamation without destroying our citizens and their water rights, we certainly do not need reclamation. The truth of the matter is we have reservoirs all over the state and a peculiar situation such as has arisen here has never occurred before. The United States was aware of the unusual nature of this situation and originally considered constructing a ditch around the reservoir for Bessemer but decided to save money and let the Bessemer's users suffer.

An associated straw is control of water quality. If government is to control the quality of the waters of Colorado's natural streams in such a way as to damage or destroy the utility of those streams, then the government should pay for the taking of that utility. Our constitutional framework is designed to prevent an aggregate of citizens, i.e., the "public", from injuring our citizens individually

or, if the public good requires the injury of individual citizens, it at least recompense them for their individual loss. That is the rule in eminent domain where property is taken for public use.

## II. ARGUMENT

- A. A water right is a usufructuary right. As a right to use, its extent, nature and value are measured by and depend upon the way an appropriator uses his water right. Consequently, the impairment of a water right, by a reduction in the very use for which the appropriation was made and has been used, constitutes a taking for which just compensation is required.

Developed over a course of more than 100 years, Colorado's system of water law has always had as a guiding light and goal the maximization of beneficial use of the State's limited waters. The concept of maximization has been inherent in our appropriative system from its inception. To this end, the law has always recognized and protected appropriations for multiple purposes, provided the multiple usage was intended to be a part of the appropriation. The law has encouraged the expenditure of money and effort to appropriate the use and reuse of Colorado's streams by guaranteeing every appropriator the protection of the rule "first in time, first in right." So important were these principles of the appropriative system to Colorado's needs and climate, that the founders of this State saw fit to place the State's guarantees beyond mere legislative enactments and incorporated them into Sections 5 and 6, Article XVI of Colorado's Constitution.

In one of the first water cases decided following Colorado's entry into the Union, this Court struck down an appropriator's claim that because his water right was acquired prior to the adoption of Colorado's Constitution, it was somehow superior to the rights of every subsequent locator on the stream, thereby allowing him, as the most senior priority, unfettered discretion in the exercise of that water right. Strickler v. City of Colorado Springs, 16 Colo. 61, 26 P. 313 (1891). Strickler was cited with approval and followed in Ft. Collins Milling & Elevator Co. v. Larimer & Weld Irr. Co.,



61 Colo. 45, 57, 156 P. 140, 144 (1916) and Colorado Milling & Elevator Co. v. Larimer & Weld Irr. Co., 26 Colo. 47, 56 P. 185 (1899) where the same argument was made.

In each of the above cases, the Court found that the law was clear. It would not permit the streams of this State to be operated at the mercy and whim of the oldest priority to the peril of all other rights in the the streams' use acquired by junior appropriators. But the holding was a two-edged sword. The Court would not demand that the senior submit to the tyranny of the junior anymore than the junior to the senior's priority. Each was given a vested right, measured in terms of his use and date of priority in the conditions surrounding his appropriation.

In each of the above cases, the senior argued that he had been deprived of a part of his property in his water right, as the result of the qualifications imposed upon the future free exercise of the senior right by the rights of junior locators. In each case the Court responded that the measure of an appropriator's constitutionally protected property right is in the use to which his water right is actually being put. To quote from the opinion in Colorado Milling & Elevator Co., supra, 26 Colo. at 49-50, 56 P. at 186-87, which involved a conflict between appropriations for two different purposes; power, on the one hand, and irrigation on the other:

. . . An appropriator of water from a stream already partly appropriated acquires a right to the surplus or residuum he appropriates; and those in whom prior rights in the same stream are vested cannot extend or enlarge their use of water to his prejudice, but are limited to their rights as they existed when he acquired his (Proctor v. Jennings, 6 Nev. 83; Cache La Poudre Reservoir Co. v. Water Supply & Storage Co., 53 Pac. 331, 25 Colo. \_\_\_\_\_; Kin. Irr. §§230, 232; Water Co. v. Powell, 34 Cal. 10), because, in such case, each, with respect to his particular appropriation, is prior in time and exclusive in right (Water Co. v. Powell, supra).

. . . the rights of the parties to this action, as measured by different particular uses of water, [and] are not affected by that provision relating to priority, as [they are] determined by the character of use. (Emphasis supplied.)

From those earliest times to the present, the progress of Colorado's water law has been a history of the development of the means of accommodating the multiple, successive, and concurrent uses of Colorado's streams which this Court made possible by first confirming, then confining each appropriator's water right to the "requirements of his use." That process culminated in the codification of procedures set forth in the Water Right Determination and Administration Act of 1969, §§ 37-92-101, et seq., C.R.S. 1973, providing for confirmation of water rights, changes in use, and the administration of Colorado's streams; and in the codification of Colorado's exchange and substitution practices in § 37-80-120, C.R.S. 1973, also passed in 1969.

Strickler v. City of Colorado Springs, supra, was one of the first cases to consider the criteria governing changes affecting both vested uses and stream conditions. In Strickler a change was sought to create a more valuable use of an early priority. The Court stated:

We think that the rule announced in Kidd v. Laird, 15 Cal. 162, 'that, in the absence of injurious consequences to others, any change which the party chooses to make is legal and proper,' is the only rule under which the rights of the prior appropriator can be fully exercised, and his rights, and the rights of all other persons, fully protected. The right to change, so limited, includes the point of diversion, and place and character of use.

\* \* \*

The court has never departed from the doctrine that running water, so long as it continues to flow in its natural course, is not and cannot be made the subject of private ownership. A right may be acquired to its use which will be regarded and protected as property, but it has been distinctly declared in such cases that the right carries with it no specific property in the water itself.

. . . We grant that the water itself is the property of the public. Its use, however, is subject to appropriation, and in this case it is conceded that the owner has the paramount right to such use. (Emphasis supplied.)

Strickler, supra, 16 Colo. at 68-70, 26 P. at 316.

The Dissent states on page 2 of its Opinion that "[t]he trend and philosophy of Colorado law are contrary to the result asked by the Plaintiffs." The trend, philosophy, and statutory requirements of Colorado's law, the State's Constitution and the private property interest it recognizes in water rights, and the Fifth Amendment to the Bill of Rights of the United States' Constitution demand that this Court affirm Plaintiffs' interest in the natural stream characteristics of the water Plaintiffs diverted before the dam's construction, at their decreed point of diversion, as, and only as, those natural stream qualities materially and substantially affect the use of their water rights.

Bessemer is not arguing for a right to recover for a taking of silt in the abstract. It does claim a right to the benefits of natural stream water which it has always enjoyed; and a right to compensation for the use that has been taken. Plaintiffs demands do not require that the stream remain unchanged, only that any change does not materially and substantially impair their water rights.

As outlined above, this Court's recognition of the usufructuary nature of water rights was the genesis of the development of the maximum utilization of Colorado's waters. Whether senior or junior, each appropriator's water rights were defined by the requirements of the use(s) to which they were put. No appropriator could claim an interest in the stream to the detriment of others in excess of the needs

of his use. Without assurance of a right to rely on a continuation of those natural conditions giving value to his water rights, no appropriator, senior or junior, would have been justified in, or willing to risk, the investment required to put the waters of this State to beneficial use. Coffin v. Left Hand Ditch Co., 6 Colo. 443 (1882). As stated by Mr. Justice Erickson on page 7 of the majority opinion, "Absent the assurance that validly appropriated water rights would receive legal protection, few persons could have made the substantial investments necessary to perfect a water appropriation."

In the opening paragraph of the dissent, Mr. Justice Groves states the following:

The fundamental question involved in this matter is whether the original appropriations for the Bessemer Ditch were for silty water. In my view the appropriations were for water, and not for water containing silt.

Dissent, at p. 1. The statement is wrong. It is simply contrary to the fundamental principles underlying the laws of water rights and is a gross misstatement of the Plaintiffs' position in this case. Bessemer and its shareholders' appropriations were not for "water," nor for "water containing silt"; their appropriations were for irrigation purposes. It is neither the water, the flow, nor the quantity of suspended solids and sediments to which Bessemer looks for its right to compensation. This action is brought because the United States changed the natural stream water being used by Plaintiffs into an unnaturally clear, toxic, hungry, and slippery substance which impairs Plaintiffs' use of their water rights.

If the United States wished to supply Bessemer with an equally effective means of achieving the same benefits of use, whether by deliveries of silty, clear, blue, green or purple water, Bessemer's shareholders would have been, and would still be, happy to accept any substitution which, as required by Colorado's statutes, "meet the requirements for which the water of the senior appropriator has normally been used." See §§37-80-120(3) and 37-92-305(5), C.R.S. 1973.

As a usufructuary right, a water right's value and its status as private property lies in the use to which it is put. A "water right" should not, as the dissent apparently does, be confused with "water." To quote one of Colorado's early Chief Justices, "Property rights in water are as important, as valuable, and as extensive as the broad acres to be fertilized thereby." Nichols v. McIntosh, 19 Colo. 22, 26, 34 P. 279, 280 (1893). The value and property is use. The Congress recognized this in passing the Reclamation Act of 1902. Section 8 of that Act, which created the Bureau of Reclamation, specifically provides, ". . . beneficial use shall be the basis, the measure, and limit of the right." (32 Stat. 390).

In another Colorado case this Court stated, "The very birth and life of a prior right to the use of water is actual user." Combs v. Agricultural Ditch Co., 17 Colo. 146, 152, 28 P. 966, 968 (1892). In Wheeler v. Northern Colo. Irrigating Co., 10 Colo. 582, 587-88, 17 P. 487, 489 (1888), of particular relevance here, the Court described the property right owned by irrigation ditch company shareholders as follows:

Our constitution dedicated all unappropriated water in the natural streams of the state 'to the use of the people,' the ownership thereof being vested in 'the public.' The same instrument guaranties in the strongest terms the right of diversion and appropriation for beneficial uses . . . the title to this water, save, perhaps, as to the limited quantity that may be actually flowing in the consumer's ditch or lateral, remains in the general public, while the paramount right to its use, unless forfeited, continues in the appropriator.

It is rights to use which the appropriator acquires.

In this regard, because this case involves not only the destruction of the Bessemer Ditch's carrying capacity but a substantial reduction in the efficiency of the water on Bessemer's nine hundred plus shareholders' 20,000 acres of truck gardens and farms, the following statement from Combs v. Farmers' High Line Canal & Res. Co., 38 Colo. 420, 429, 88 P. 396, 399 (1907), is relevant:

Where the consumer of water makes the diversion himself, a completed appropriation is made by the same person; but where the diversion is made by a carrier [the Bessemer Ditch Company], and the successful application is made by another who is the consumer, a completed appropriation is the result of their combined acts.

What the appropriator owns isn't "water" or "silty water," but the right to use the water of the natural stream.

See the material quoted from Strickler v. City of Colorado Springs, supra.

Other Colorado cases have described the elements which constitute an appropriation and the property right which is acquired thereby. In Woods v. Sargent, 43 Colo. 268, 271, 95 P. 932, 933 (1908), the Court said:

In order to constitute an appropriation of water there must not only be a diversion of the water from the stream and a carrying of it to the place of use, but it must be beneficially applied, and the measure of the appropriation does not depend alone upon the amount diverted and carried, but the amount which is applied to a beneficial use must also be considered.

In Knapp v. Colorado River Water Conservation District, 131 Colo. 42, 52-53, 279 P.2d 420, 425 (1955), this Court set forth one of its most succinct statements concerning the nature of a water right:

As beneficial use is the ultimate essential in the establishment of a water right, so it is also essential in the perpetuation of such right. Notwithstanding that it has been held that water when reduced to possession is personal property, Brighton Ditch Co. v. City of Englewood, 124 Colo. 366, 373, 237 P.2d 116, a water right is something vastly different and, when perfected by appropriation and beneficial use of water, constitutes realty in the nature of a possessory right. 'Although a water right has attained to the dignity of real property, it cannot be said that it has attained to the dignity of an estate in fee or a freehold estate. It is still a possessory right, even after its consummation, and dependent upon the continuous use of the water, and a failure to comply with this condition subjects the right to loss by abandonment. . . . Kinney on Irrigation and Water Rights (2d Ed.), p. 1978, § 1100.

Note the Court's words that, ". . . a water right is something vastly different. . ." from "water."

Defining the nature of a water right in terms of the use to which it is actually put accomplishes two goals. First, it gives certainty to new appropriations. Second, it allows all appropriators on the stream, to make whatever changes in the use of their water rights they wish so long as the uses of the remaining appropriators are not adversely affected. A comprehensive citation of authority for the foregoing proposition would doubtlessly number several hundred Colorado cases. See, e.g., Farmers Highline Canal & Res. Co. v City of Golden, 129 Colo. 575, 579-80, 272 P.2d 629, 631-32 (1954).

If this Court retains any doubt as to what an appropriator acquires when he makes his appropriation, it should examine its decision in Farmers Irrigation Co. v. Game and Fish Commission, 149 Colo. 318, 369 P.2d 557 (1962). That case

clearly established that what a ditch company and its shareholders acquire when they make an appropriation is the use of the water and not the "water" itself. In that case Plaintiffs, the ditch company and its shareholders, A. Antonelli, et al., owned decreed rights for irrigation and domestic uses. They sued the Game and Fish Commission for a taking of a use of their water rights.

In 1954, the Game and Fish Commission built and began operating the Rifle Falls Fish Hatchery on East Rifle Creek. As a part of its operations, the Commission diverted the entire flow of East Rifle Creek through its hatchery for the purposes of raising fish. The Commission's use was nonconsumptive and all the diverted waters returned to East Rifle Creek at a point approximately three-quarters of a mile downstream. Plaintiffs diverted their water downstream from the point of return through the Harvey Gap Reservoir (a Bureau of Reclamation project) and the Harvey Gap Ditch for agricultural and domestic uses on their farms. Twice a year the ditch company would make "cistern" runs to supply its users with domestic water. Its users would take domestic water at other times as well.

The State's operation of the fish hatchery changed the quality of the water available to plaintiffs, rendering it unfit for one of the uses, domestic, to which it was appropriated without in any way reducing the volume delivered. In the above case, and its subsequent companion, Game and Fish Commission v. Farmers Irrigation Co., 162 Colo. 301, 426 P.2d 562 (1967), this Court held that the fact that there was no reduction or change in the time, place, manner, flow, quantity or means of diversion of plaintiffs' water rights



by the Commission's use, did not mean that plaintiffs had suffered no taking. Said the Court in answering the question of whether plaintiffs had been deprived of a part of their property:

The question is answered in the affirmative. Article XVI, Section 5 of the Constitution of Colorado provides that:

The water of every natural stream, not heretofore appropriated, within the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided.

Section 6 of the same Article contains the following:

The right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied. Priority of appropriation shall give the better right as between those using the water for the same purposes; . . .

A priority to the use of water for irrigation or domestic purposes is a property right and as such is fully protected by the constitutional guaranties relating to property in general.

Article II, Section 15 of the Colorado Constitution provides in pertinent part:

Private property shall not be taken or damaged, for public or private use, without just compensation.

Farmers Irrigation Company v. Game and Fish Com'n., *supra*, 149 Colo. at 322-23, 369 P.2d at 559-60. The rule of the case is clear. The fact that the Game and Fish Commission took no "water" in terms of amount from plaintiffs did not mean it had not taken a part of plaintiffs' water rights measured in terms of those qualities of the natural stream appropriated, relied upon and used by plaintiffs.

The principle that the property which an appropriator acquires when he makes an appropriation under Colorado's Constitution is not just "water" per se, but rather its uses

is further vividly illustrated by the following case. In Highland Ditch Co. v. Union Reservoir Co., 53 Colo. 483, 485, 127 P. 1025 (1912) the Union Reservoir sought to claim a right to "water." Said the Court in denying the claim:

. . . It is unnecessary to enter into a discussion of the evidence further than to state that possibly, excepting a portion of the volume awarded, it appears that appellee has never applied the water stored in its reservoir to the irrigation of lands. Diversion and storage are not sufficient to constitute an appropriation. In addition, the water so diverted and stored must be beneficially applied; that is, in this instance, it must have been applied to lands for the purposes of irrigation. (Emphasis added)

What are the criteria which an appropriation must meet?

Faden v. Hubbel, 93 Colo. 358, 361, 28 P.2d 247 (1933), recognized a right to appropriate water for fish propagation, and stated as follows on page 248:

. . . The supply, even under the most favorable circumstances, is very meager; it amounts to about only one second foot, which multiplies its duty. It demands strict conservation and constant use and reuse without diminution in time, quality, or quantity in order to adequately supply the needs of all who are lawfully entitled thereto for the above useful purpose.

Numerous other cases citing "quality" are set forth in Plaintiffs' original Opening and Reply Briefs.

The demands of use which a water right must meet to serve the needs for which an appropriation is made are many. In this regard, the legislature's statement in 1969 in the River Basin Authorities Act, § 37-93-101 et seq., C.R.S. 1973, is illuminating. Section 37-93-101 charges River Basin Authorities "to encourage maximum utilization of and benefit from all water supplies within the state of Colorado by planned management." The Act then goes on to discuss some of the duties of River Basin Authorities. Section 37-93-105(1)(f)(I)(B), C.R.S. 1973, provides with respect to the proper (i.e., maximum) utilization of agricultural water as follows:

(B) Full water supply-agricultural. A full water supply at the farm headgate is that quantity and quality of irrigation water in addition to natural precipitation which is adequate when applied consistent with good farming practices to supply crop consumptive uses and soil leaching requirements plus reasonable farm losses. Such supply will vary from year to year and throughout each year as influenced by use patterns and climatic conditions and will be dependent upon type of crop, soil, and topographic conditions. Such a supply, if converted to diversion requirements, must include reasonable transportation losses, and storage losses where applicable, between the point of diversion and the farm headgate. (Emphasis supplied)

Again, as in §§ 37-80-120(3) and 37-92-305(5), C.R.S. 1973, quoted above, we see the word "quality" used in reference to the requirements of use of the water right.

Throughout these proceedings Plaintiffs have had to use terms to describe their claim which have taken on meanings outside their relevance to this case. The terms "dirty" or "silty" have not been objectively or neutrally used. On the other hand, the "clear" water forced on Plaintiffs by the United States sounds like far too innocent and innocuous a thing to have caused the ravages which Plaintiffs have suffered. For this reason, Plaintiffs will sometimes use the terms "hungry" or "slippery" to describe the reservoir water delivered Bessemer's ditch by the United States. Those terms more accurately describe the type and qualities of water which Plaintiffs are now receiving.

As discussed in the opening portion of this brief, the United States and Amici have sought to place substantial emphasis on the proposition that Plaintiffs' use of the natural stream's waters is inefficient and wasteful. They point to the statement that Bessemer's users have always suffered shortages. Those shortages will not be helped by the substantial reduction in on-the-farm irrigation efficiency caused by the United States' substitution of reservoir water.

Ignoring for a moment the farm "losses" and considering only ditch losses, the following is apparent. There are over 200 miles of ditch and laterals in Bessemer's system. (Statement of Facts, ¶ 1, Pl. 2). In 1976 hungry water so severely damaged a 600-foot section of the ditch it had to be replaced at a cost to the company of about \$30,000. (Affidavit of John W. Patterson, App. p. 10). This Court can be assured that if more water could be economically delivered to Plaintiffs, or any other users on ditches in the Arkansas, who suffer the same shortages referred to by the United States, the ditch companies would be lining their ditches today. Even the Bureau of Reclamation must recognize however, that if the cost of achieving those additional deliveries so far exceeds the benefits to be attained, then the project makes no sense.

In this regard, both with respect to the losses of use in the ditch and on the farm, Bessemer's enjoyment of the benefits of natural stream water are analogous to the natural benefits sought to be used by the United States in its selection of the site for the construction of Pueblo Reservoir. To add to a statement by Amicus, the Southeast Water Conservancy District at p. 3 of its opening brief; "As man harnesses rivers, so does he progress. . . ." and as he learns to make use of the natural advantages provided by Mother Nature's streams so does he learn economy and prospers.

The law did not require that in building Pueblo Reservoir the Bureau of Reclamation find a flat site somewhere on Colorado's eastern plains and proceed to build four walls or dig a hole to hold its water. Nor did the law require Bessemer's users in making their appropriations to plan for the accommodation

of reservoir water which is so hungry and slippery that it cannot be carried in earthen ditches and requires almost a third again as much volumn and irrigation head, at the farm, to irrigate the same acreage.

Indeed, as recognized by the Court's majority in its citation of Larimer County Reservoir Co. v. People, 8 Colo. 614, 9 P. 794, 796 (1886), this state has long recognized the privilege of using the natural advantages of a stream channel to build a reservoir provided:

The privilege so recognized is, of course, qualified by the condition that no injury to others shall result through its invocation. He who attempts to appropriate water in this way does so at his peril. He must see to it that no legal right of prior appropriators, or of other persons, is any way interfered with by his acts. He cannot lessen the quantity of water, seriously impair its quality, or impede its natural flow, to the detriment of others who have acquired legal rights therein superior to his.. . . (Emphasis supplied)

Bessemer's appropriations were made between 1861 and 1887 (App. 9). In considering the above "injury to others," the majority of this Court recognized that Bessemer could not have made an appropriation of sufficient size during the period 1861 to 1887 to protect itself from that injury. As pointed out by Mr. Justice Erickson in the majority opinion, such an attempt would have failed because one can not appropriate a greater flow of water than one can put to beneficial use. Mountain Meadow Ditch and Irrigation Co. v. Park Ditch and Reservoir Co., 130 Colo. 537, 277 P.2d 527 (1954); Enlarged Southside Irrigation Ditch Co. v. John's Flood Ditch Co., 120 Colo. 423, 210 P.2d 982 (1949); Baker v. City of Pueblo, 87 Colo. 489, 289 P.2d 603 (1930); White v. Nuckolls, 49 Colo. 170, 112 P. 329 (1910); Colorado Milling and Elevator Co. v. Larimer and Weld Irrigation Co., 26 Colo. 47, 56 P. 185 (1899). And, if perchance, a court

did award a decree for such a large amount of water, this Court holds that the decree affords protection only to the extent of actual beneficial use. See eg., Green v. Chaffee Ditch Co., 150 Colo. 91, 371 P.2d 775, 782(1962).

A number of Amici have raised the argument that the majority's decision will make reservoirs second class rights vis-a-vis direct flow rights. The argument is not new. It describes a controversy that lurked in the shadows of Colorado's law for almost 50 years until finally decided on its third rehearing in People ex rel. Park Reservoir Company v. Hinderlider, 98 Colo. 505, 57 P.2d 894 (1936) miscited on page 23 of the United States' Opening Brief on Rehearing.

Before discussing the substance of the case, which, according to the author of the opinion was of such a nature that, "Perhaps few cases in this Court have been more fully presented, or received more careful and extended consideration by the Justices, due largely to the extent and importance of the interests involved and the number and standing of counsel representing those interests," the Court set forth a number of governing principles of Colorado water law which have relevance here:

Sections 5 and 6 of article 16, Colorado Constitution, are self-executing. Lyons v Longmont, 54 Colo. 112, 129 P. 198.

The police power cannot transcend the Constitution nor be so exercised as to abrogate it. Smith v. Farr, 46 Colo. 364, 104 P. 401.

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Water rights are property rights. Ft. Lyon Canal Co. v. Rocky Ford Co., 79 Colo. 511, 515, 246 P.781.

The test of priority of right is beneficial use, not means of application. Thomas v. Guiraud et al., 6 Colo. 530.

The rule "First in time first in right" applies as between users for the same purpose. Section 6, art. 16, Colo. Constitution.

Junior appropriators may not infringe the right of seniors. Comstock v. Ramsay, 55 Colo. 244, 133 P.1107.

Junior appropriators for a use preferred under said section 6 may not take from senior appropriators for a subordinate use without compensation. Town of Sterling v. Pawnee D. E. Co., 42 Colo. 421, 94 P. 339, 15 L.R.A.(N.S.) 238.

People ex rel. Park Reservoir Co. v. Hinderlider, 98 Colo. at 507-08, 57 P.2d at 895. In resolving the controversy between appropriations for direct flow uses and those for storage for subsequent use, the Court declared that neither use was to be preferred over the other; they were equal. Colorado's General Irrigation Act of 1879, § 38, p. 106 had raised the issue of whether or not a reservoir, regardless of its priority, could ever store when there was a demand for the direct use of the water. The decision involved a consideration of preferred uses under the law. After discussing the provisions of Colorado's Constitution, Art. XVI, § 6, providing:

Priority of appropriation shall give the better right as between those using water for the same purpose; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using water for domestic purposes shall have the preference over those claiming for any other purpose, and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes.

The Court held there was no preference for one use, i.e., direct, over the other, i.e., storage. As between the two the doctrine of "first in time, first in right" would control. As quoted above, junior appropriators could not infringe upon the rights of seniors. If their use was to be preferred, then they could only take the senior's use by paying just compensation.

The Southeastern District and the United States seek to exalt the benefits of their reservoir project over the private vested rights of Plaintiffs. On that point the law, like the water delivered Plaintiffs, is crystal clear. In addition to Hallenbeck v. Granby Ditch and Reservoir Co., 160 Colo. 555, 420 P.2d 419 (1966) and Farmers' High Line Canal & Reservoir Co. v. Wolff, 23 Colo.App. 570, 131 P. 291 (1913) cited in Plaintiffs' earlier briefs, this Court had the following to say in Trinchera Ranch Co. v. Trinchera Irrigation District, 83 Colo. 451, 266 P. 204 at 208 (1928):

An irrigation district has broad powers including that of condemnation; but when it comes to changing a point of diversion, it is governed by the same law, and is required to conform to the same procedure, that apply to private persons; and in such proceeding it has the same right as, and no greater right than, the humblest appropriator upon the stream.

The above violates no federal policy as evidenced by the following statement of the United States Supreme Court in United States v. Gerlach Livestock Co., 339 U.S. 725, 752, 94 L.Ed. 1231, 70 S.Ct. 955, 969 (1950), where the Supreme Court specifically said, concerning Bureau of Reclamation projects:

But the public welfare, which requires claimants to sacrifice their benefits to broader ones from a higher utilization, does not necessarily require that their loss be uncompensated anymore than in other takings where private rights are surrendered in the public interest. . . . This project anticipates recoupment of its costs over a 40-year period. No reason appears why those who get the waters should be spared from making whole those from whom they are taken. Public interest requires appropriations; it does not require expropriation. (Emphasis supplied)

This Court most recently reechoed that sentiment in City of Thornton v. Farmers Reservoir and Irrigation Co., \_\_\_ Colo. \_\_\_, 575 P.2d 382 (1978).



A taking is a taking, and the only protection afforded the private sector against unbridled exercises of sovereign authority is to require that the government account, under the Constitution, for its actions affecting private property by paying just compensation. To refuse to recognize Plaintiffs' property in a quality of natural stream water which materially and substantially affects their ability to use their water rights, is to deprive the private sector of its only shield against government indifference.

Finally, it is misleading to think that Plaintiffs are requesting water quality which they received when Bessemer originally made its appropriations 100 or more years ago. Amici have sought to use that argument to create the impression that any change in water quality made subsequent to the first appropriator's appropriation is actionable. Such a decision they say would enable every prior appropriator to play the role of dog-in-the-manger whenever a subsequent locator or existing user seeks to make a new appropriation or change the nature of his original use. Stretched to the limits of its canine logic Amici's argument would bar any further use or reuse of Colorado's waters.

This is the same sort of argument first made in Strickler v. City of Colorado Springs, supra, (see above at pp.7-8), and this Court's majority answered that argument in footnote 4 at page 14 of its opinion. Whenever an appropriator makes an appropriation in Colorado, he does it with the sure and certain knowledge that there will be subsequent users on the stream whose uses will, of necessity, cause changes in stream conditions. The changes are generally two fold. There may be a net reduction in quantity and a change in

quality of the streams waters. In every case, it is not the change per se which is prohibited, but rather changes which affect the vested rights, i.e. uses, of other appropriators which the law guards against.

The law does not require appropriators to guard against any and every injury imaginable. To be objectionable, the change must cause an injury that is "material" or "substantial" in nature. See Plaintiffs' Reply Brief, p. 30-31. As this court said in Brighton Ditch Co. v. City Of Englewood, 124 Colo. 366, 373, 237 P.2d 116, 120 (1951):

. . . the limitation upon such change is not the mere inconvenience in use or even loss to others resulting thereby but injury affecting 'the vested rights of others in and to the use of water.' Such vested rights include not only [the] right to diversion of water from the stream in the chronological order of priority, but also the right to maintenance of conditions on the stream existing at the time of appropriation.

Injuries of an immaterial or de minimus nature are not actionable.

The words "maintenance of conditions. . . existing at the time of appropriation" were picked up almost verbatim from the language of earlier Colorado cases, such as Vogel v. Minnesota Canal & Res. Co., 47 Colo. 534, 107 P. 1108 (1910), when stream conditions had changed little and the language was an accurate summary of the appropriator's right. In Vogel, the Court explained what it meant by the above language in the following way:

If this means anything, it is that when the junior appropriator makes his appropriation he acquires a vested right in the conditions then prevailing upon the stream, and surrounding the general method of use of water therefrom. He has a right to assume that these are fixed conditions and will so remain, at least without substantial change, unless it appears that a proposed change will not work harm to his vested rights.

47 Colo. at 541, 107 P. at 1111.

Every appropriator in Colorado has adjusted his uses to the gradual changes brought about by subsequent appropriations and changes in previously existing rights. The effects on the stream have either gone unnoticed, or been so immaterial and de minimus in nature that they would not have sustained an action in any event. See, e.g., CF&I Steel Corp. v. Rooks, 178 Colo. 110, 495 P.2d 1134 (1972). Each appropriator has adjusted his operations year by year to the cumulative effects of these diffuse changes which he knew would occur when he made his appropriations. Each separate change was de minimus and not material and therefore not actionable. If any particular change was material, then it was actionable. If the appropriator failed to protect his rights, then operation of limitations, laches, waiver or estoppel would now bar any proceedings, if the source of the change could even be located.

Plaintiffs have none of the foregoing problems. The source of the change in the quality of water delivered their ditch is not diffuse in nature; it cannot be accommodated; and the cause, time, and persons responsible for the change are known with absolute certainty. The United States' change of the waters natural quality has been sudden, drastic, and, most important, of a substantial and materially injurious nature to Plaintiffs uses.

In short, the property represented by a water right is the use to which it is put. When someone takes away a part of that use, the property has been damaged and the owner thereof is entitled to recover.

B. Maximum utilization does not require or contemplate the destruction of one persons water rights for the benefit of others without just compensation. The destruction of existing uses for the purpose of transferring a portion of the benefit thereby lost to others is not maximum utilization.

The Dissent's statement at page 1 of its opinion that the majority's decision represents "a substantial step backwards with respect to the portion of the Colorado water law here involved," confuses water utilization with what the United States has actually done in this case. The acts of the United States and, presumably, the Southeastern Water Conservancy District (in its Petition for Rehearing the District appeared anxious to assume full responsibility for those acts), speak not to the maximum utilization of Colorado's waters, but to the unilateral alteration of a stream system for the convenience of one user, resulting in the taking of other users' valuable vested rights. This unilateral expropriation of water rights by the United States under the guise of reclamation is a far cry from the orderly, statutory procedures contemplated by Colorado's law and codified in §§ 37-80-120 and 37-92-305, C.R.S. 1973.

Plaintiffs can not believe that the dissent here intended to depart from well established principles of stare decisis by denying Plaintiffs compensation for the taking of a substantial part of the utility of their water rights. A vast amount of experience and thought went into the development of Colorado's water law, and into the design of this State's administration of our water resources under that law. Colorado's law does not point one user to take upon himself control of its streams and by so doing deprive others of their water rights.

The Legislature codified some of Colorado's 100 years of experience and case law in §37-80-120(3) and §37-92-305(5), C.R.S. 1973 which provide in pertinent part:

37-80-120(3) Any substituted water shall be of a quality and continuity to meet the requirements of use to which the senior appropriation has normally been put.

37-92-305(5) In the case of plans for augmentation including exchange, the supplier may take an equivalent amount of water at his point of diversion or storage if such water is available without impairing the rights of others. Any substituted water shall be of a quality and quantity so as to meet the requirements for which water of the senior appropriator has normally been used, and such substituted water shall be accepted by the senior appropriator in substitution for water derived by the exercise of his decreed rights. (Emphasis supplied)

Both Articles 80 and 92 of Title 37 explicitly require "quality" fit for the "requirements of use," and provide for the institution of court proceedings to confirm and control the substitution and exchange of water. In particular §37-80-120(2), C.R.S. 1973 provides that an exchange or substitution practice "may be confirmed by court order as provided for determining water rights. . . ." Subsection 37-80-120(4), C.R.S. 1973 then describes the right of substitution or exchange as "an appropriative right [which] may be adjudicated or otherwise evidenced as any other right of appropriation."

What the United States has done here, by unilaterally substituting reservoir water for stream water, is to take an appropriative right out of Bessemer's water rights and take a part of Plaintiffs' use of their water rights by failing to meet the water quality requirements of the statute and Plaintiffs' needs. Both the Reclamation Act of 1902, 32 Stat. 390, 43 U.S.C. § 371 et seq., and Colorado's law require just compensation for that taking. To repeat the United States Supreme Court, "Public interest requires appropriations; it does not require expropriations."

United States v. Gerlach Livestock Company, 339 U.S. 725, 753; 70 S.Ct. 955, 969; 94 L.Ed. 1231 (1950).

Colorado has recognized the right of a holder of an easement, such as a ditch right-of-way, to be compensated for the taking of a use in that easement. In the case of

Chicago, B. & Q. R. Co. v. Public Utilities Commission, 69 Colo. 275, 193 P. 726 (1920) the Public Utilities Commission sought to take a use in the railroad's right-of-way by ordering it to build a crossing for the opening of a new street. In reversing the Trial Court's order upholding the Commission's taking this Court stated:

[2] The fact that property may be damaged or destroyed, without compensation, under the police power, has no bearing upon this controversy. Here the property is to be "taken," and devoted to a public use, the railroad company retaining a right to its use, qualified by the right of the public to a new use. "Property" consists, not in the thing said to be owned, but in the right to dominion over it, control of its use, and disposition. The thing owned may be tangible or intangible, a fee in land or an easement in it. A railroad company across whose tracks a street is opened loses the exclusive control--which is property--over the part devoted to street purposes, and hence a part of its property is "taken." Its right to compensation for that part is a natural right, protected by express constitutional provisions. Such is the declaration of the United States Supreme Court in the case last cited.

69 Colo. at 279, 193 P. at 728. The loss of Plaintiffs' right to reach the natural stream with Bessemer's ditch and the loss of the full use of their water rights has been a taking of Plaintiffs' property by the United States.

The management and administration of Colorado's water resources has been placed in our courts for the very reason that maximum utilization can not be achieved by allowing public agencies, such as the Bureau of Reclamation or the Southeastern Water Conservancy District, to arbitrarily and unilaterally disrupt stream conditions and interfere with private vested rights just because they claim to be promoting "maximum utilization." As discussed below, Colorado's rivers, especially the Arkansas, are not so simple that their management can be left in the hands of one or two far from impartial users, such as the Bureau of Reclamation.

Bessemer's ditch and Plaintiffs' uses have never been wasteful: the fact that water leaks and seeps through the soil of ditches, or the land to which it is applied, does not mean that that water goes to "waste." If water did not seep into the ground it could not irrigate the crops to which it was applied. As this Court stated in City of Boulder v. Boulder & Left Hand Ditch Co., \_\_\_ Colo. \_\_\_, 1557 P.2d 1182, 1185, (1976) "Return flow is not waste water. Rather, it is irrigation water seeping back to a stream after it has gone under ground to perform its nutritional function." In Fellhauer v. People, 167 Colo. 320, 447 P.2d 986 (1968), this Court described the problems of regulating the use of that vast underground reservoir created by irrigation return flows in the Arkansas Valley.

One of the most valuable water management and storage devices enjoyed by this state are irrigation return flows. For example, Monte Vista Canal Co. v. Centennial Irrigating Ditch Co., 24 Colo. App. 496, 504-05, 135 P. 981 at 984-85 (1913) contains the following language:

". . .and I think it is well known by all who have given any careful attention to that, that instead of this fact proving an injury, it has proven beneficial, for the reason that the greater the area that is covered with water in irrigation, the more water finds its way back to the river as seepage, in seasons of the year when water becomes scarcer. That the river carries more water by reason of this seepage, upon account of the enlarged area that is covered by water in irrigation. The water which might otherwise flow away and leave the country, in times of sufficiency of water, would instead, by reason of a large area being irrigated, be seeping back by means of percolation and seepage, reaching the river during all portions of the year, so that the flow in the river would be more nearly equalized during the entire season."

We may readily concede the correctness of the views expressed by the learned trial judge, that, as a whole, the vast territory irrigated or to be irrigated from the Rio Grande river may be benefited in general by the application of water during flood seasons to the largest possible area of irrigated lands; that thereby the soil of the entire area becomes a vast reservoir from which the water has a tendency to return slowly to the stream at some point in its course, and thereby many more acres, as a whole, may be irrigated than if the water were permitted to run off; but the fact that many more acres and people may be served by this means of . . .

This Court can take judicial notice of the fact that prior to extensive cultivation and irrigation of the eastern part of this state, both the Platte and Arkansas Rivers were seasonal streams, whose uses have been greatly benefited by return flows. See, Kansas v. Colorado, 206 U.S. 46, 27 S.Ct. 655, 675 (1906) involving the Arkansas River.

The gradual expansion of irrigation and resulting return flows has served to spread out the effects of seasonal peaks in the river flow, making water available for use to appropriators over a longer, and during the hot months of summer, much more valuable period of time. Irrigation waters applied, and not consumptively used in the growth of crops, percolate into the underlying alluvium where they begin a slow return to the river. Once lost to the dominion of the irrigator, they are once more a part of the natural stream subject to appropriation by subsequent users for use over and over again. See e.g., Fellhauer v. People, 167 Colo. 320, 447 Pac. 2d 986 (1968).

The underground reservoir created by irrigation return flows is frequently more efficient than an equivalent amount of storage provided by surface reservoirs. Obviously a surface reservoir the size of Pueblo Reservoir, located in a climate like Pueblo's, will suffer substantially more evaporative losses than alluvial storage. Losses may run as high as forty to forty-five acre feet per day during the hot months. These losses are permanent losses to the stream, and occur whether or not the water in the reservoir is being used. On the other hand, waters captured in the river's alluvium are protected from evaporative losses and are frequently more accessible to immediate further uses through wells.



By pointing out the usual and customary facts of ditch seepage and farm irrigation "losses," Bessemer merely calls attention to the normal condition in Colorado. Plaintiffs do not want this Court to be misled into thinking that Bessemer has ever maintained a "wasteful" ditch. Nor do Plaintiffs want this Court to be misled as to the issues in this case: Ditch losses and structural injuries aside, the most extensive taking which has occurred is the loss of on-the-farm utility. On the farm, the clear, slippery, reservoir water's reduced spreadability minimizes, not maximizes, water utility. Greater utility is not achieved with an equivalent volume of reservoir water which will irrigate only about two-thirds as much crop as natural stream water (App. 5, 11).

Every ditch in Colorado, including concrete ditches, leak. Contrary to the implication which the minority opinion seems to derive from that fact in Middelkamp v. Bessemer Irrigating Ditch Co., 46 Colo. 102, 103 P. 280(1909), the case does not stand for the proposition that before the United States reservoir deliveries Bessemer's ditch was inefficient. In fact, as noted in Part I, above, the Court found the contrary. Nor does Middelkamp stand for the fact that any "seepage" was "waste."

Middelkamp does stand for the proposition that anyone engaged in an activity, such as the construction of an irrigation project, requiring the condemnation of private property, pay just compensation for what is taken. That requirement specifically extends to the taking of an easement in another's property, and it is not excused by the fact that the public policy of this state is to place its water to beneficial use.

Colorado's public policy of encouraging the placement of its waters to beneficial use has justified the power to

take, not to steal. In this regard the Court's attention is respectfully directed to its decision in San Luis Valley Irrigation District v. Noffsinger, 85 Colo. 202, 205, 274 P.2d 827, 828 (1929) where this court said: <sup>1</sup>

". . . section 15, art. 2, of our State Constitution which provides 'that private property shall not be taken or damaged, for public or private use, without just compensation.' That section is a part of our Bill of Rights. It marks the boundary beyond which the people have forbidden their lawmakers to pass, and, by the same token, have commanded their courts to hold any such passage illegal. How inviolable that constitutional inhibition is demonstrated by the fact that we once inadvertently permitted its protection to be threatened (North Sterling Dist. v. Dickman, 59 Colo. 169, 149 P. 97, Ann. Cas, 1916D, 973), but at the first opportunity overruled the dangerous precedent and returned to the solid ground of strict construction \* \* \* the district is given the right to enter and take, but is nowhere absolved from the obligation to pay. It may purchase, condemn, or settle, but it must pay." (Emphasis supplied)

The ruling in San Luis Valley is notable for another reason. If, in fact, Bessemer and its shareholders have been "specially benefited" by the destruction of their property as claimed by the United States (Opening Brief at p. 6), the value of those special benefits may be offset against the value of

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1. Middelkamp v. Bessemer Irrigating Ditch Co., 46 Colo. 102, 103 P. 280 (1909) involved a case where the ditch was properly constructed and carefully operated but nevertheless caused seepage damage to a plaintiff. Since the cause of action had arisen more than six years before the complaint was filed, the court held that the statute of limitations barred the action. North Sterling Irrigation District v. Dickman, 59 Colo. 169, 149 P. 97 (1915), involved a similar situation except that the action was brought within the statute of limitations. The court held that in the absence of negligence the plaintiff could not recover. San Luis Valley Irrigation District, supra, held that there could be recovery irrespective of negligence because of the invasion of the property rights of the property owner.

the property taken. This will be a damage question for the Court of Claims.<sup>2</sup>

Substantial reliance has been placed on the case of Schodde v. Twin Falls Land & Water Co., 224 U.S. 107, 56 L.Ed. 686, 32 S.Ct. 470 (1911) by both the Dissent and various Amici for the proposition that, "An appropriator cannot command the entire flow of a stream solely in order to facilitate his taking of a small portion thereof." This statement applies to the conduct of the United States and the District; not to Bessemer or its shareholders.

Bessemer's diversions constitute approximately ten percent of the flow of the Arkansas's river. Thus, by the United States and the Conservancy District's own logic, it would appear that Bessemer ought to be able to command at least 10 percent of the natural flow of the river under any circumstances. On the other hand, Pueblo Dam, as an onstream reservoir, commands the entire flow of the Arkansas, including Bessemer's ten percent. While the Dam commands the entire flow of the River, its rights to store water from the Arkansas, with a 1939 priority date, are so junior that they have not yet, after almost five years, even come into priority. In fact, we will have to wait for another year like the 1965 flood before Pueblo Reservoir ever stores any water under its Arkansas River rights (App. 6). If anyone is commanding the entire flow of

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2. In this regard the United States has taken pains to point out that Bessemer now enjoys flood protection; a superior diversion facility; free operation and maintenance of over one mile of ditch just below the dam; and storage rights in Pueblo Reservoir under contracts with the Federal government all as a result of the project. Bessemer pays for the benefits it receives under the storage contracts. The other "benefits" are either the necessary result of the United States' decision to take, or are benefits that are enjoyed by every taxpayer in the Arkansas Valley. If any of those benefits constitute "special benefits," about which there is a large body of law, the Court of Claims will be competent to offset their value against the injury done.

the River it is the United States and the Southeastern Water Conservancy District who do so in order, to take a part so miniscule it has yet to fall from the heavens.

Everyone can agree with the above proposition enunciated Schodde, but few, if any modern courts have had to follow the drastic solution of the Supreme Court. Saddled by the limited legal tools with which it had to work in 1911, the United States Supreme Court found it could not, in good conscience, grant the equitable relief requested by Minnie Schodde and enjoin further storage. The Court, unable to adjust the rights of the parties before it, affirmed the dismissal of the case.

Compare the far better tools for maximizing use which Colorado has worked out over the years. The owner of a water right may change its place, character, time or manner of use and, in fact, make any kind of change that can be imagined, absent injury to others. If injury would result, an applicant may still accomplish the change by imposing terms and conditions in the decree to prevent injury. Cache La Poudre Water Users Ass'n v. Glacier View Meadows, \_\_\_ Colo. \_\_\_, 550 P.2d 288 (1976); Kelly Ranch v. Southeastern Water Conservancy District, \_\_\_ Colo. \_\_\_, 550 P.2d 297 (1976); Bates v. Hall, 44 Colo. 360, 98 P. 3 (1908). The above concepts were well expressed by this Court in City of Colorado Springs v. Yust, 126 Colo. 289, 294, 249 P.2d 151, 154 (1952):

The inherent right to change the point of diversion includes not only the right to change without condition, if such change can be made without substantial injury to the vested rights of others, but also the right to change subject to conditions, if injury to rights of others may thereby be avoided.

The trial court is required to make two findings if it is to deny a requested decree: (1) The proposed plan will cause injury to the water rights of the others; and (2) such injurious effect may not be prevented by the imposition of terms and conditions. The second requirement is spelled out in Bates v. Hall, supra; City of Colorado Springs v. Yust, supra; and Mannon v. Farmers' High Line Canal and Reservoir Company, 145 Colo. 379, 360 P.2d 417 (1961). These procedures have been codified in the Substitute Supply Statute, § 37-80-120, C.R.S. 1973, and in the Water Right Determination and Administrative Act of 1969, § 37-92-101, et seq., C.R.S. 1973, particularly § 37-92-305, to which the Substitute Supply Statute refers.

The foregoing Colorado procedures recognize that the necessary first step in resolving any water right case is to recognize that a problem exists and to define what it is. The next is to determine the terms and conditions which will prevent injury. The last is a part of the case in which the trial court is to take an active part. Mannon, supra.

With respect to Schodde then, there is absolutely no doubt whatsoever in Colorado, that the generation of power by means of water is a water right, entitled to the full protection of our laws and Constitution. The Oregon Supreme Court was left to deal with the dilemma of Minnie Schodde's water wheel some 29 years later after the United States Supreme Court had supposedly put the matter to rest. In the case of In re Water Rights of Deschutes River and Tributaries, \_\_\_\_ Or. \_\_\_\_, 286 P. 563 (1930), the Oregon Court, after outlining the problem and the foregoing proposition from Schodde, declined to follow Schodde, stating at p. 581:

. . . In fact, the question of the use of water for power purposes, by this claimant, is an engineering proposition.

\* \* \*

We are referred to the case of Schodde v. Twin Falls Land & Water Co., 224 U.S. 107, 32 S.Ct. 470, 56 L.Ed. 686.. . .

We approve the principle enunciated in those cases, but the facts differ from those relating to the claim in hand. If there is weakness in this claim of appropriation for power purposes, it is in the matter of the fall or head of the water. We cannot say that the claim is not for the use of water for a beneficial purpose. On the other hand, it must be classed as an advantageous and beneficial use of the water for power purposes. It is a reasonable use. (Emphasis supplied)

Something doesn't become an "engineering proposition" until the problem is recognized and a solution sought.<sup>3</sup> In refusing to recognize that Plaintiffs had any interest in the quality of the water delivered to their ditch, the Bureau of Reclamation arbitrarily terminated any solution process, legal or otherwise, before it could even begin. (As to Bureau solutions, see page 42 below.)

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3. The experience that the United States and Denver have had with their conflicting reservoir interests on the Blue River is an excellent illustration of both flexibility and maximum utilization. The United States Bureau of Reclamation operates Green Mountain Reservoir which is downstream from Denver's Dillon Reservoir. Green Mountain holds priorities for direct flow for power purposes large enough to call down the entire flow of the Blue at all times of the year. It also has a storage priority. It uses part of the stored water for replacement of Colorado Big Thompson transmountain diversions and part to improve agricultural priorities on the Western Slope. Denver, the United States, and Western Slope interests entered into what is popularly called the "Blue River Decree" under which the United States takes one annual fill at Green Mountain and uses the water for Big Thompson replacement and Western Slope uses. Denver takes the remainder of the Blue River at Dillon. Denver delivers power to the United States equal in amount to the power which the United States would otherwise have generated at Green Mountain with the water Denver takes, the agreement permitting Denver to divert on its junior priorities at Dillon and transmit the diverted waters through the Roberts Tunnel to the Denver municipal area. Portions of this Decree are presently in litigation in the Tenth Circuit Court of Appeals, Docket No. 78-1378, titled United States of America v. Northern Colorado Water Conservancy District, et al.

Compare the actions of the United States in this case with this Court's solution in Joseph W. Bowles Reservoir Co. v. Bennett, 92 Colo. 16, 18 P.2d 313 (1932). Bowles involved a junior appropriator's displacement of a seniors means of using his reservoir water rights. The senior could not prevent the change so long as the junior held the senior's uses harmless.

Many courts cite Schodde with approval, but none have adopted the draconian solution which the United States Supreme Court rendered. This Court cited Schodde in City of Colorado Springs v. Bender, 148 Colo. 458, 366 P.2d 552 (1961), and after examining it, went on to clearly state at page 556:

Fundamental among the principles applicable here is the rule that a junior appropriator may not divert the water to which he is entitled by any method or means the result of which will be to diminish or interfere with the right of a senior appropriator to full use of his appropriation. (Emphasis supplied)

Note the Court's words "full use." Plaintiffs assert a constitutional right in the full use of their appropriations which they have been deprived of. Any solutions to allow Plaintiffs to retain the full use of their water rights were not explored. What solutions might have been found will have to await a recognition of Plaintiffs' property interests in their water rights.<sup>4</sup>

Plaintiffs informed the United States of their specific objections to clear water while Pueblo Dam was in the design stage. If the United States and, presumably, the Southeastern Water Conservancy District, which claims some responsibility for the acts of the United States, wanted to test the sufficiency of Plaintiffs' claims prior to destroying the utility of Plaintiffs water rights, they could have brought a proceeding in Colorado's Courts for authority to

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4. See the discussion of the Bureau's Flaming Gorge Reservoir Project, below, at p. 42.

substitute water and to change the headgate and point of diversion of Plaintiffs' water rights, or they might have sought a declaratory judgment action in the Federal District Court.

The latter was the procedure used by the United States in United States v. Martin and DeBerard Cattle Co., 267 F.2d 764 (10th Cir. 1959) involving the Bureau of Reclamation's Colorado-Big Thompson project. In that case the United States sought a determination as to its responsibility to compensate the defendants for a taking of water rights which would be adversely affected by the impoundment and storage of water. In holding the project's storage and transmountain diversion of Western Slope water would seriously affect the natural stream regimen relied upon and used by Defendants in irrigating approximately 5,000 acres of land near Kremmling, Colorado, the Tenth Circuit held that the United States would be required to pay defendants just compensation. The decision was reaffirmed in United States v. Northern Colorado Water Conservancy District, 449 F.2d 1 (10th Cir. 1971), upholding a judgment of \$10,000 against the United States under the Tucker Act, 28 U.S.C. § 1346, for a taking of the means of applying water rights to beneficial use. That is all Plaintiffs ask here.

Any reclamation project, whether public or private, that takes, injures or destroys water rights must bear the cost of such taking as a part of the project's cost. If the project isn't sound enough to bear such costs, then it is not the type of reclamation we need in this State. More particularly, if the price of federal, or any other reclamation, is the



destruction of the utility of a large body of our water, in order to move a small portion of that utility from one set of users to another, without compensating those from whom the use is taken, it is not only unconstitutional, it is unjustified and economically unsound.

Congress recognized the foregoing principle in Section 4 of the Reclamation Act of 1902 by mandating that every Bureau of Reclamation Project justify its costs, and if the cost/benefit ratio is unfavorable, i.e., the project will produce more injury, loss of use and cost more than the benefits it will generate, then the project should not be authorized. 43 Stat. 702, 43 U.S.C.A. § 412.

If the Bureau refuses to recognize that there is a clear water problem then, in its estimates of project costs and benefits which it must use to justify projects to Congress, there will be no figures which accurately reflect the true worth of a project, not only to Congress, but more importantly, to the water users of this State. Poor planning which grows out of a refusal to recognize a problem does not promote the best use of our State's waters.

Filed in these proceedings is an Amicus Brief by the Highline Canal and the Catlin Canal. Located a short distance downstream from Pueblo Reservoir, clear water effects on these Ditch systems are just beginning to be noticed, quantified and evaluated. Clear water in the Highline Canal has increased carriage (ditch) losses from 18% to 30%, and the clear water will not spread as far. The Catlin Canal, which is located a little further downstream from the Highline, is just beginning to feel these clear water effects. Plaintiffs have no idea how far downstream clear water effect might spread.<sup>5</sup>

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5. As noted in Part C, below, at p. 56, the River will continue to strip silts and sediments from its channel until a new equilibrium can be established.

In this light, it would be well to take a look at the purported benefits to agriculture of the Frying Pan-Arkansas Project. The Project was designed to bring into the Arkansas River Valley an average of 69,200 acre-feet of transmountain water per year. As noted above, there is very little, if any, Arkansas River water available for appropriation by the project. Of the transmountain water brought into the Valley, 51% has been allocated (at least on a tentative basis) to municipal uses and the remaining 49% (33,900 acre-feet) to agricultural applications.

Bessemer's clear water ditch losses are running in the neighborhood of approximately 25% (App. 5, 10). Plaintiffs' annual diversions average about 50,000 acre-feet of water per year. A fourth of that water, or 12,500 acre-feet, no longer reaches Plaintiffs' farms. The Highline Canal diverts, on an average, 70,000 acre-feet of Arkansas River Water per year. The 12% increase in ditch losses claimed by the Highline results in approximately 8,400 acre-feet less water reaching its users. These figures aggregate 20,900 acre-feet of water lost to Bessemer and Highline users due to increased clear water seepage in the ditches.

The figure does not include other losses in use caused by clear water. Bessemer's experience is that clear water will run down ditch rows only about two-thirds as far as silty water (App. 5, 11). The shorter runs required the construction of additional laterals which destroys farm land and requires more land be devoted to machinery turn-around space. More labor is required. The clear water grows moss faster and the main ditch and laterals are sloughing off. Finally, it takes substantially longer to run water. It has been necessary for Bessemer to reduce the head at which it runs water to 220 cubic feet per second (c.f.s.) for safety reasons, despite the fact that it ran silty water at 300-320

c.f.s. (Pl. 7) when available under Bessemer's priorities. This represents a direct loss of a substantial amount of water.

In view of the losses in water use which Pueblo Reservoir's clear water is accomplishing, it may be appropriate to question the utility of the Pueblo project, at least as it is presently operated and designed, insofar as agriculture "benefits" are concerned. The losses in water use to Bessemer and downstream ditches of this magnitude demand a solution.

In this regard, the Bureau of Reclamation has excellent engineers. Where a problem is recognized, a solution can usually be devised. For example, as to what the Bureau's engineers have done for water quality problems created by Bureau dams where fish are concerned, the Sunday, March 26, 1978 edition of The Denver Post's Empire Magazine carried the following story by Zeke Scher entitled "How They Tricked Mother Nature at Flaming Gorge." The opening paragraphs provide:

What is a healthy fish worth? The people at Flaming Gorge, where the Colorado, Utah and Wyoming borders meet, have put a price tag of \$4,582,000 on theirs. Too high? Therein lies our story.

In the next few weeks, finishing touches will be applied to a very unusual project aimed at improving the habitat of fish that once flourished in the Green River below Flaming Gorge Dam. If successful, the project will restore the area to its former status as "one of the outstanding quality fishing streams in the nation."

The article goes on to describe the installation of three 600 ton structures in the waters of Flaming Gorge Reservoir at the face of the dam to raise water temperatures below the dam for trout fishing. One can only wish that the Bureau

had recognized the clear water problem at Pueblo years ago and tried to solve it then.<sup>6</sup>

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6. The article then went on to describe, in part, as follows:

The Green River water flows through the dam at three penstock intakes located 195 feet down from the top. In the early years of the dam, impounded waters were shallow, circulated freely and absorbed some of the surface warmth in season. This continued the "normal" status of the river below the dam for several years.

Fish flourished. . . .

By the early '70s, however, the dam was filling and water flowing through the dam came from the dark, perpetually cold (39 degrees) deep strata. As the tailwater temperatures declined, fingerlings couldn't make it and the wildlife agency planted larger catchables which were much more costly.

\* \* \*

The problem was clear: The dam water was too cold to produce healthy fish (or the tidbits for them to eat). The solution was complex. How do you warm up an impounded Green River, water 400 feet deep fresh off the Continental Divide by way of the Wind River Range and western Wyoming's high plains?

\* \* \*

The solution was to take water through the dam from the upper levels as soon as it warmed up in the spring, But the dam intakes are 195 feet down. The problem was turned over to the mechanical engineers at the Reclamation Bureau's Engineering & Research Center in Building 67 . . . .

The assignment was a first of its kind: To modify intakes of a completed dam for temperature control.

\* \* \*

The designers came up with a huge super-boxcar-like structure for each of the three intakes. They would be more than two-thirds of a football field long, 30 feet wide and 30 feet high. Made of steel, the initial weight estimate for each was 600 tons.

\* \* \*

The diving work was expensive - about \$2,700 an hour. . . .

\* \* \*

With \$384,000 worth of "overhead" on the books, plus the big contract, the project to warm up the fish is costing \$4,582,000 to date. Is it a bargain?

A.E. "Bud" Duey, chief of the Flaming Gorge Field Division of the Reclamation Bureau, thinks so "if it will do what they say it will do." He says "lots of people" use the river.

Although the issue of damages is not now before this Court, it is being asked to engage in speculation on behalf of the Southeastern Water Conservancy District as to what the extent of the United States' taking might be. The measure of the United States' taking in the Bessemer case will not depend upon the establishment of some arbitrary silt figure. Bessemer's claim to compensation, as recognized by the majority opinion, does not grow from some "net" quantity of silt carried in the waters of the Arkansas River, nor does the claim rest upon a net reduction in such quantity. The measure of Plaintiffs' loss, and the government's taking, is in the reduction of the utility of Plaintiffs' water rights. That loss is measured in terms of the loss of water delivered to the farm; and the loss of the effective ability to apply the water that does arrive on the farm to the soil to grow crops. The value of the loss in use is a question for the Court of Claims. In this regard, the change in the quality of water delivered Bessemer can be paralleled to the case of an appropriation for fishery which depends upon a particular temperature (quality) of water. If a cooling plant using water for industrial purposes were placed immediately above the fishery so as to raise or lower the natural stream's temperature, thereby destroying the fishery's use of the water, there would be a taking. The taking would occur without, in any way, changing any other natural quality of the water and the value of the taking would be the loss of use of the water right.

In any case, the right of an appropriator to recover for the taking depends upon his making an appropriation which establishes the requirements of his use. As the majority of this Court described in Footnote 4 at page 14

of its Opinion, net fluctuations in the quantity or quality of water in a stream do not give rise to a cause of action where they do not affect vested uses of other appropriators. No appropriator, including Bessemer's shareholders, may argue for a right to recover for a taking of their property in the abstract. As stated in Strickler v. City of Colorado Springs, supra, an appropriator's rights are no greater than the use to which his water is actually put.

In Colorado, the development of maximum utilization demands not only flexibility in providing for and exploring new, alternate, and potentially better means of use, it also demands protection of the hard won gains made in battles already fought. The Water Right Determination and Administration Act of 1969, § 37-92-101, et seq., C.R.S. 1973, and the Substitution Statute, § 37-80-120, C.R.S. 1973, do just that. They protect the kind of hard fought gains made by Bessemer in its own reclamation of approximately 20,000 acres of land from this state's harsh and arid climate.

The Western States, led by Colorado, have just recently won control of their water against the federal government. See Akin v. United States, 424 U.S. 800, 47 L.Ed.2d 483, 96 S.Ct. 1236 (1976); United States v. District Court for Eagle County, 41 U.S. 520, 28 L.Ed.2d 278, 91 S.Ct. 998 (1971) and United States v. District Court for Water Division No. 5, 41 U.S. 527, 28 L.Ed.2d 284, 91 S.Ct. 1003 (1971). The most recent decision in this area was decided shortly after this case was argued. California v. United States, decided July 3, 1978, \_\_\_ U.S. \_\_\_, \_\_\_ L.Ed.2d \_\_\_, 98 S.Ct. 2985 (1978). That case holds that the Bureau of Reclamation is bound by conditions required by the California State Water Resources

Control Board in permits for Bureau water rights, established in accordance with California law.

To regard this case as one in which water rights are measured solely in terms of the chemical "water" (H<sub>2</sub>O), is to expose Colorado's appropriators to the full measure of Federal and state regulation without any of the protections customarily afforded private property. Without a protectable interest in the quality of their water, appropriators have no shield against the government's regulatory sword. Their water rights are left naked to a vast and practically endless array of government regulatory machinery.

Balanced against the ever-increasing, sometimes contradictory, regulatory pressures of Federal and State agencies are the private sector's constitutional rights in the use and preservation of their property. Absent a property right the attributes which make private property, including water rights, valuable and useful may be cursorily destroyed by the whims and fancies of an administrative agency.

Contrary to the positions of various Amici and the State of Colorado, the majority's decision in this case will not mean an end to all Federal reclamation or large reservoir projects in the state. Quite the opposite. By protecting "quality" in terms of the "requirements of use" the majority's decision assures solutions to problems in achieving the most utility from water and water rights. It serves nothing to build projects that destroy as much as they create. It serves the west well to recognize the silt problem where present, and then act to design or operate the project that the problem is solved.

Bessemer and its shareholders do not now, nor have they ever sought to prevent the United States from building Pueblo Reservoir. Indeed, they could not do so. The United States Supreme Court addressed just such an attempt to stop a Bureau of Reclamation Project in California in Dugan v. Rank, 372 U.S. 609, 83 S.Ct. 999, 10 L.Ed. 2d 15 (1963). The Supreme Court reversed the Federal District Court's injunction halting the project or, in the alternative requiring that the government supply a "physical" solution to the taking. The Supreme Court held Plaintiffs' sole remedy for the taking of their water rights was to proceed under the Tucker Act, 28 U.S.C. § 1346.

The fact that problem created for Bessemer and downstream ditches by Pueblo Reservoir is rare and can be seen from the fact that this is a case of first impression in Colorado<sup>7</sup> and indeed, practically the United States. An exhaustive search of legal, legislative, scientific and administrative materials by Plaintiffs has turned up only two other instances in which the precise issue involved in this case has arisen. Both cases, and a third analogous situation,

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7. There are reservoirs all over the state; none has created the problem involved here. Streambed reservoirs on the Platte River, starting at the upper end in South Park include Antero Reservoir, Eleven Mile Canyon Reservoir, Cheesman Reservoir and on tributaries the Cherry Creek Reservoir, Chatfield Reservoir and Mt. Carbon on Bear Creek. The nature of the natural flow of the Platte River is such that none of these reservoirs has changed quality of water passing through the reservoir to the detriment of any appropriator. The same thing is true in western Colorado. There is the large Dillon Reservoir and Green Mountain Reservoir on the Blue River and the Taylor, Blue Mesa and Morrow Point on the Gunnison as well as such reservoirs as Vallecipo, Shadow Mountain, Grandby, Horsetooth and many others. None changed the basic character of the natural stream. The United States well knew and gave substantial consideration to the fact that Pueblo Dam was different and that the reservoir it formed would cause damage. The United States deliberately chose to damage the Bessemer water users without compensating them.



support the position taken by Plaintiffs in this case, and the majority's decision. <sup>8</sup>

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8. The analogous problem involved the Bureau of Reclamation and Soap Lake, located in central Washington. Soap Lake is a naturally saline lake greatly prized for the medicinal qualities of the water around which a town of the same name has grown. In its Eighteenth Biannual Report of the Department of Conservation and Development, State of Washington (July 1, 1954 - June 30, 1976), the Department described a problem caused by the infiltration of fresh irrigation waters from the Bureau of Reclamation's Columbia Basin Project. Fresh reservoir water was diluting the naturally saline lake destroying the qualities prized by the town. It was charged that waters of the Bureau's Equalizing Reservoir were seeping through underground channels into the lake. The report described by the Columbia Basin Commission effort ....

. . . to aid in solving the problem which resulted from the dilution of the mineral contents of Soap Lake by the infiltration of fresh water.

\* \* \*

Fresh water has been seeping into Soap Lake at a high rate and at a rate greater than can be equaled by natural evaporation. . . . there is danger that the saline content will be so diluted that it would not have the medicinal values which are now claimed for the water.

Soap Lake people were desirous of saving the lake in its present saline condition, claiming that it had medicinal values and had attracted 40,000 visitors a year, many of whom came to take treatments. These visitors came from virtually every state and even some from foreign lands.

At a meeting in Kennewick, members of the Soap Lake City Council appealed to the Commission to assist in striving to save Soap Lake in its present saline condition. This support was given and the Commission aided in getting a bill passed through Congress which would provide for exploratory work that may find the way to solve the problem. Commission representatives testified before the Senate Interior and Insular Affairs Committee, . . . . The Commission maintained that the people who have used this lake for the treatment of various diseases sincerely believe they have been aided by it, and for that reason, the lake should be maintained in its present condition if at all possible and at a cost which was not exorbitant.

Immediately following this testimony, the presiding officer at the hearing instructed the Bureau to engage consultants to search for ways in which the fresh water can be intercepted to keep it from the lake, if at all possible. An appropriation of \$233,000 was made to carry on the task of trying to save Soap Lake. This money will be spent in addition to the exploratory work for drilling interceptor wells in an effort to capture the fresh water before it reaches the lake, and the bids for the first contract for that work will be opened on August 16. (Emphasis added.)

Plaintiffs are informed that the end result of the project was for the Bureau of Reclamation to construct a network of interception wells around the lake which prevent the irrigation waters from the reservoir from seeping into the Lake.

The first, referred to extensively in Bessemer's opening and reply briefs, involved the construction of an onstream reservoir in Idaho, Arkoosh v. Big Wood Canal Co., 48 Idaho 383, 283 Pac. 522 (1929). In that case, the issue involved the removal of the stream's natural silt by a reservoir. The removal and resultant discharges of hungry water destroyed the waters transportability through the river to Plaintiffs lands. The question was litigated and unequivocally decided in favor of Plaintiffs positions.

The second example comes out of the States of Wyoming and Nebraska and involves the Bureau of Reclamation's operation of Guernsey Reservoir which holds water rights for irrigation and power generation purposes on the North Platte River. Guernsey Reservoir is an onstream reservoir completed in 1927 as a part of the North Platte River Project, originally authorized by the Secretary of Interior in 1903. It is a part of a system of reservoirs used to regulate the irrigation of some 226,000 acres of land. Before the construction of the Reservoir, the irrigation systems downstream received silty, natural stream water from their Whalen diversion works on the North Platte River.

In a paper presented to the Sixth Congress of the International Commission on Irrigation and Drainage, E. T. Bradford and E. A. Jarecki, Engineers for Region 7 (Lower Missouri Basin), U. S. Bureau of Reclamation, described the history and operation of Guernsey Reservoir stating:

Guernsey Dam was constructed in 1927, about 11.3 kilometers (7 river miles) above Whalen Diversion Dam. Following completion of construction it was noted that the resultant clear water releases tended to increase water losses and bank erosion in the irrigation water conveyances. To alleviate this problem Guernsey

Reservoir was drawn (down) purposely in 1936. With the lowered water surface, sediments deposited in the reservoir area were eroded and conveyed through the system with the irrigation waters, which resulted in a reported reduction of seepage losses. Intermittent reservoir drawdowns for sediment withdrawal have been continued since that time to aid in the reduction of seepage losses and to obtain corresponding savings of irrigation water.

With the construction of Glendo Dam and Reservoir in 1957, about 25.8 kilometers (16 river miles) upstream from Guernsey Reservoir, sediment inflow to Guernsey Reservoir was drastically reduced. Unconsolidated sediments previously deposited annually in the upper reaches of the reservoir were no longer available; hence, it became necessary to draw Guernsey down to a much lower level to flush sediments from the reservoir with a resultant loss in power generation. Because of this loss in power revenues and the fact that the various reservoirs on the North Platte River require a closely-integrated operation for optimum power generation, irrigation and other purposes, it became necessary to evaluate fully the effectiveness of the sediment-laden water upon seepage losses in the irrigation conveyances to study its economic worth.

That three year study resulted in the preparation of a document by the Department of Interior, Bureau of Reclamation, entitled "Final Report, Silting and Seepage Investigation North Platte Project, Wyoming-Nebraska" (1963). In its introduction at page 1 the report describes the problem addressed by the Bureau of Reclamation as follows:

The 1958 irrigation season was the first irrigation season with water releases being made from Glendo Reservoir for the North Platte Project. Sediment which had normally been carried into the canals and laterals of the project was being trapped in Glendo Reservoir. At the gaging station below Glendo Dam or at Wendover Gaging Station, the water was so clear the bottom of the channel could easily be seen. This clear water flow continued through Guernsey Reservoir and into the river below. At Whalen Dam, the clear water was divided into the Interstate Canal System north of the river and into the Ft. Laramie Canal System south of the river. As the water flowed through the systems during 1958 and 1959, seepage losses began to increase. During 1958, occasional storms and resulting runoff provided some silt in the system, so water losses were not too severe. During 1959, however, weather conditions were somewhat unusual. During July and August, the precipitation was far below normal, so no muddy water

entered the canals from the side drainage areas. In July 1959, at Mile 19.2, the lower bank of the Interstate Canal in the Pathfinder Irrigation District sloughed, and for a while it looked as if a major canal break would occur. Trouble began in the Goshen Irrigation District on the south side of the North Platte River at the same time. Several reaches in the first four or five miles of the Ft. Laramie Canal appeared weakened and seepage from the canal increased.

In the latter part of July 1959, the irrigation districts of the North Platte Project held a joint meeting to discuss the clear water problems and to try to arrive at a solution. . . . It was decided the silt was necessary and Guernsey was lowered.

As a result of this study, the Bureau of Reclamation concluded greater benefits could be achieved by drawing down Guernsey Reservoir, at the sacrifice of power generating capacity, to flush accumulated silts from the reservoir into the North Platte River for diversion by the downstream ditches. The Bureau of Reclamation has operated Guernsey Reservoir in this manner until October of this year. Irrigators receiving water from the project have happily paid an additional power charge to cover the loss of power generating revenues, which the silt-loading operation required, in order to obtain the silty water.

The Bureau of Reclamation will spend almost \$5 Million to return the quality of reservoir water delivered the Green River below the Bureau's Flaming Gorge Reservoir to its "natural" state in order to save trout fishing. That money is not being spent to preserve any appropriators vested rights and a good part of that cost must be attributed to the complex problem of installing temperature control technology in a dam which is already built, 200 feet under water. In this regard, Plaintiffs tried to draw the United States' attention to the problems of delivering unnaturally clear, toxic reservoir water directly into their earthen ditch long before the reservoir was built. The Bureau refused to listen. In view of the 1963 silting and seepage report, this conduct was indeed strange.

It seems to Bessemer that the house of the United States is in disarray. The Bureau of Reclamation operates its North Platte Project so as to preserve the values of silty water for downstream ditches and users. It operates its Frying Pan-Arkansas Project and Pueblo Reservoir in such a way as to deny downstream users and Bessemer these same values. It will spend \$5 Million to restore water quality at Flaming Gorge for fish habitat but refuses to spend money to restore the natural quality of water for Arkansas Valley irrigators.

Should this Court adopt the minority view we might then wind up with the interesting situation where turbidity is not a part of water quality on the Eastern Slope or in the San Luis Valley and in parts of western Colorado, but is a stream requirement in other parts of western Colorado. This results from an action by the United States Fish & Wildlife Service which has proposed designation of 623 miles of rivers in Colorado and Utah as critical habitat for the Colorado river's squawfish<sup>9</sup> which evolved "in the turbulent,

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9. The article in the Friday, September 15, 1978 Rocky Mountain News, p. 59 entitled "Colorado squawfish gets help from U.S." provided in part:

Washington The U.S. Fish and Wildlife Service proposed Thursday that 623 miles of rivers in Colorado and Utah be designated as critical habitat for the Colorado River squawfish, described as the largest minnow in North America.

Keith Schreiner, associate director, said the service knows of no project now under construction that might be limited by the proposed action, but "a number of proposed federal projects" might present conflicts.

Schreiner's office could give no details on these projects, but referred questions to regional officials in Denver.

\* \* \*

According to the Fish and Wildlife Service, the historic range of the squawfish was the Colorado River and its main tributaries in seven states. The fish once reached lengths of six feet and weights of 80 pounds, but now seldom reach three feet in length.

Schreiner said dams on the Colorado and major tributaries and resulting changes in environmental conditions have eliminated the species from lower basin states and reduced the population in the upper basin.

The species evolved in the turbulent, muddy Colorado, he said, and seems unable to adjust to the changed habitat which results from impoundment of water. (Emphasis supplied)

muddy Colorado" and to the best of Plaintiffs' knowledge never made an appropriation under Colorado law. Since this designation was made under the Endangered Species Act, it is entirely probable that the requirements of this Act will cause any dams built in the designated area be constructed so as to pass a substantial part of the silty water around or through the reservoir.

Part C of this Brief may be summarized as follows:

Under the Reclamation Act the United States is required to comply with Colorado Law and to pay for all property, including water rights that it takes for its project. Colorado law requires that any substitution or exchange of water be of a quality to meet the requirements of use to which Plaintiffs senior appropriations have had and were being put to use. Since the reservoir water supplied Plaintiffs by the United States does not do this, the United States took a part of Bessemer's water rights. The extent of compensation to which Plaintiffs may be entitled for the taking will be a matter for the Court of Claims to decide. Any special benefits which the United States and the District claim to have bestowed upon Bessemer by this project, if proven, may be offset by that Court against the taking. As stated in United States v. Gerlach Livestock Co., supra:

Public interest requires appropriations; it does not require expropriations.

The United States' blind refusal to recognize the fact that, under the particular circumstances presented by this case, the change in stream conditions caused by the sustained delivery of clear, reservoir water is not sanctioned by Colorado's water law or its procedures. Had the United States been willing to recognize the problem, an excellent

solution might have been found. It was not. Colorado water law can not trust or afford to sanction the unilateral alteration of stream conditions engaged in by the Bureau of Reclamation solely because it claims to be promoting greater use of the state's waters.

The assertions that Bessemer is attempting to control the entire river simply has no basis in fact. The United States may substitute any quality of water it wishes at Bessemer's headgate in the dam so long as the water meets Plaintiffs requirements of use. If it does not, then Plaintiffs have been deprived of a part of their water rights.

Colorado water law has been well designed to maximize water use. In this regard, it does not suffer from the conflicting goals of different agencies which the federal government does. By requiring the imposition of terms and conditions to prevent injury to the vested rights of others Colorado's system of water law guarantees maximum utilization and it prevents arbitrary and unilateral actions by the United States or any other powerful quasi-public state agency which minimize water use under the disguise of maximum utilization. The United States has not maximized use by destroying a substantial part of Plaintiffs' use.

Had the United States made use of the tools available to it under Colorado law, or brought a declaratory judgment action in the Federal District Court, it could have ascertained in advance the scope of its responsibility to Plaintiffs and existing users. Having failed to do so, and having expropriated a part of Bessemer's water rights, the United States must now respond by paying for the uses taken.

C. This is a water right, not a water pollution case.

Plaintiffs readopt their original position and arguments set forth in Part II, D, pp. 33-41, of their Reply Brief before this Court, in which they stated:

The United States is right when it states that, 'This is not a pollution case.' (Defendants, Brief, p. 3.)

This is not now, and never has been a pollution case. The United States and Amici argue that Plaintiffs are seeking "polluted" water. They claim that the majority's decision in this case will impair the public goal of cleaning up our nation's streams and lakes. The arguments are nothing more than red herrings designed to mislead this Court. What effect Plaintiffs rights in natural stream water might have on the State and Federal government's water quality control statutes is not now, and never has been, before this Court. See, Question Certified by United States Court of Claims (Pl. 2).

The Colorado Water Quality Control Act (hereafter CWQCA), §25-8-101 et seq., C.R.S. 1973, was modeled after the federal act, and has its source in Colorado's 1973 Session Laws, beginning at p. 709. The Federal Water Pollution Control Act (hereafter FWPCA) has its principal source in P.L. 92-500, 33 U.S.C. § 1251 et seq., passed by the Congress in 1972. Ignoring for the moment the after-the-fact nature of the United States and Amici water quality arguments, the State and Federal Acts provide as follows: The Federal Water Pollution Control Act (hereafter FWPCA) provides that it is the goal of the act ". . .to restore and maintain the chemical, physical and biological integrity of the nation's water." 33 U.S.C. §1251. The Act defines pollution as "the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water." 33 U.S.C. § 1362(19). Colorado's Water Quality Control Act (hereafter CWQCA) contains what may be a broader definition of the word "pollution" which it defines as ". . .



the man-made, man-induced or natural alteration of the physical, chemical, biological or radiological integrity of water." § 25-8-103, C.R.S. 1973. Both acts refer to "integrity."

Both Acts are designed to regulate discharges of man-made or man-induced pollutants into our nation's streams. The Acts simply have no application to the removal, as opposed to addition by discharges, of substances from the streams waters. Still less do they apply to the removal of natural substances which were a part of the stream long before "the irreversible perturbations" of mans' activity. See Plaintiffs' Reply Brief, P. 37. The framework for Colorado's permit system is set forth in § 25-8-501, C.R.S. 1973.

Applied to the facts at hand, we simply have no situation in this case to which the Acts permit discharge systems apply. Here the clear reservoir water is delivered (i.e. discharge) directly into an irrigation ditch, which is not a natural stream. Second there is no discharge of a "pollutant" into any water. At most there is a removal of a natural substance by the United States. In fact, if there is a man-made or man-induced alternation of the physical and biological integrity of the Arkansas' natural waters, it is the United States' radical alteration those waters by the removal of almost all the natural silts and sediments. That change has turned the Arkansas natural waters into, as far as Plaintiffs and the stream's ecosystem are concerned, a toxic substance.<sup>10</sup> Bureau of Reclamation's, Design of Small Dams (1977).

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10. In what is generally regarded as an authoritative treatises on small dam design, the Bureau of Reclamation had the following to say with respect to stream equilibrium and an onstream reservoirs channel "degradation." Degradation meaning the removal of silts and sediments by the natural effects of clear reservoir water.

H-4. CHANNEL DEGRADATION - A natural flowing stream is usually in a state of quasi-equilibrium; that is, there is no long-term trend toward aggradation or degradation. A stream in equilibrium is said to be a stream in regime [22]. The state of stream equilibrium may be expressed qualitatively by the following equation:

$Q_g d = k Q_w S$  where:  
 $Q_g$  = bed material discharge  
 $d$  = sediment particle diameter  
 $Q_w$  = water discharge  
 $S$  = slope of the stream  
 $k$  = constant of proportionality.

If any one of the four variables is altered, one or more of the other variables must undergo change to return the stream to a state of equilibrium. . . . The process of removing sediment particles from the streambed and banks is referred to as degradation.

In its Brief on Rehearing at p. 11, the United States has sought to draw this Court's attention to distinctions between the Federal Act and Colorado's Act, stating that,

For its part, the CWQCA reflecting Colorado's concern for its precious water supply, may well be even more forceful than the FWPCA . . ." (Emphasis supplied.)

The United States is right. Colorado's concern for the use of its limited water supply by protecting water users vested rights in their use of that supply, is more forceful. For that reason, Colorado's Legislature specifically added the following provision to §25-8-506, C.R.S. 1973, of the Water Quality Control Act:

. . .Nothing in this article shall supercede the provisions of Articles 80 to 93 of Title 37, C.R.S. 1973.

Articles 80 to 93 of Title 37 which the above-provision of the CWQCA explicitly makes that Act subject to, require that any substitute water supplied an appropriator be of a quality which meets the appropriator's "requirements of use." See, §§37-80-120(3), 37-92-305(5) and 37-93-105(1)(f)(I)(B), C.R.S. 1973, discussed above. In this regard the Court's statement in Denver v. Fulton Irrigating Ditch Co., 179 Colo. 47, 58, 506 P.2d 144, 150(1972) to the effect that water is fungible as long as there is no question of quality is pertinent.

The unnaturally clear waters which now exist below Pueblo Reservoir in the Arkansas River are seeking to reestablish a natural state of equilibrium as they flow downstream. The clear water travels downstream scouring out the beds, banks and channel of the river and any irrigation system into which it is taken. How far downstream these clear water effects will travel before the River once again reestablishes

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an equilibrium is unknown. But it is clear that such clear water effects are having a material and substantial adverse impact on irrigators' abilities to use their water rights. As discussed above, Plaintiffs are not arguing against efforts to control unnaturally large quantities of silt which heavy storms may periodically cause to be dumped into the river. They are arguing that they have a vested interest in a minimum natural silt load (150 to 300 ppm) which will maintain ditch and river stability and sustain the beneficial uses of their water rights. The water delivered Plaintiffs' does not even meet these minimum standards necessary to protect Plaintiffs existing uses and the streams.

The truth of the matter is, that, not only do the regulatory provisions of the Water Quality Control Acts not apply to this case, but the Water Quality Control Acts themselves, pursuant to which the United States and Amici now try to justify the taking of Plaintiffs' water rights were not even in existence at the time the United States initiated its Condemnation Action in 1969. The water quality arguments are nothing more than an after-the-fact effort by the United States and Amici to justify a major unilateral alteration in stream conditions resulting in the taking of Plaintiffs' use of their water rights. This alteration and taking was done by and for the sole benefit and convenience of the United States Bureau of Reclamation for the purpose of simplifying its design and construction of Pueblo Dam. In choosing to ignore Plaintiffs' claims at the time it filed its Complaint in Condemnation, the federal government was following no regulatory statute or procedure designed to clean up this nation's waters. It was simply electing to ignore Plaintiffs'

vested interests in the quality of their water because it made building Pueblo Dam easier. Having decided to take Plaintiffs water rights, the United States cannot now convert its actions into a regulatory decision.

Plaintiffs would make one final comment concerning the water quality control arguments raised by Amici, the Conservancy Districts, which we believe sheds some light on the nature of those arguments and the positions urged by various Amicus. On the one hand, we have the State of Colorado and Federal Government who have as their goal the regulation of discharges into the State's streams. On the other, we have a number of Conservancy Districts, who Plaintiffs assume would represent to a certain extent at least, agricultural users who have substantial interest in the extent and manner in which the State and Federal Government will seek to regulate agricultural uses under the Water Quality Control Acts. Some of the Amici in this case appear to be arguing that Pueblo Reservoir's delivery of clear water to Plaintiffs' ditch constitutes a discharge into a natural stream. If that were the case, every irrigation tail ditch returning water to the main ditch would be a "discharge" subject to the permit provisions of the Water Quality Control Acts.

Plaintiffs believe that some of the Conservancy Districts' arguments concerning the scope of the government's regulatory authority would not be in accordance with the views of the Districts' users. In this regard, arguments that water quality is a desirable goal in and of itself, without regard to the use of the waters make no sense. Neither Congress or Colorado's legislature were operating in a vacuum when they drafted and adopted the Water Quality Control Acts. They

recognize that water quality (like water rights) can not be defined without reference to the uses to which our streams are put. The pursuit of water quality for the sake of quality alone would be absurd, and in fact in conflict with many of our waters uses both natural and man-made. For example water of a quality for one of the above purposes, i.e. wildlife or aquatic life, may be too cold or "dirty" for another, i.e., domestic. Silt in certain concentrations is beneficial to entities such as Bessemer or Colorado River Squawfish. Neither the Federal nor the State law intended such natural concentrations to be "pollution."



D. Miscellaneous

In its Petition for Rehearing, the Southeastern Colorado Water Conservancy District has come forth to assert itself as the "real party in interest." It has alleged that its interests were inadequately and incompetently represented by the United States both in this action, and, apparently, before the United States District Court for Colorado. It seeks to attack Judge Arraj's opinion of May 8, 1973 on the grounds that the District had no opportunity to adequately brief the issues before the Federal District Court. It has gone so far as to imply in its Petition for Rehearing that the Statement of Facts supplied this Court by the Court of Claims were the product of collusion between Plaintiffs' Counsel and the United States.

As the "real party in interest," the Southeastern District has been aware of Bessemer's specific objections to the United States' condemnation, the relocation of its headgate and ditch and the substitution of clear reservoir water for natural stream water since the very inception of the Pueblo project. Plaintiffs' objections to the relocation of their ditch and the reservoir deliveries were made well known, long before actual construction of the dam even began when Plaintiffs filed their claims with the Federal District Court and the Court of Claims. The Conservancy District could have intervened in those proceedings. It did not.

As the "real party in interest," if Amicus, Southeastern Colorado Water Conservancy District, felt that the United States was unfamiliar with Colorado's water law or Colorado's system for the adjudication of changes in use and the substitution or exchange of water, it should have come forward when Plaintiffs' objections were first voiced to

suggest that the United States at least consider filing an application in the appropriate State Court to determine what, if any, terms and conditions should be imposed on the United States change and substitution practice to protect Plaintiffs and the stream. In the alternative, the District should have suggested that the United States consider filing a declaratory judgment action as was done in the case of United States v. Martin & De Berard Cattle Co., supra. The District did none of those things. If the District feels it will now be injured by the United States' actions in this case, it, like Plaintiffs have had to do to protect their interests, may file its own action to seek whatever relief it may feel itself entitled to.

A substantial portion of the District's Petition for Rehearing is devoted to stressing the amount of damages sought by Plaintiffs. As discussed previously, the extent of those damages will be decided by the Court of Claims when this matter comes before it. If in fact Bessemer has suffered no loss in the use of its water, it will recover no damages. On the other hand, if the loss in utility of Bessemer's water rights does indeed approach the \$100 Million figure pointed to by the Southeastern District, that would be a vivid illustration of both the folly of this project and the folly of refusing to recognize a problem so that a solution can be sought.

The Southeastern Water Conservancy District's contract with the United States is not before this Court. Yet, in its Petition for Rehearing, the Southeastern District has taken great pains to point out that in the event Plaintiffs should recover from the United States, the United States has claimed that half the costs of that recovery will be assessed against the District as a project "construction" cost under the terms of its contract with the District. In the Appendix

prepared by Plaintiffs and forwarded to this Court by the United States Court of Claims as a part of its record, are the Complaint in Condemnation (App. 26) and the Declaration of Taking (App. 38) of the United States. Those documents provide that:

After May 1 the United States, at its sole expense, will divert the decreed water in accordance with Colorado law from Pueblo Dam in Parcel and operate, maintain, and convey water easterly through Parcels D and E to Parcel F to the Bessemer Irrigating Ditch Company as described in (b) above.

No mention is made to what portion of this expense, if any, is to be borne by the Southeastern Conservancy District or whether it is a "construction" cost. If the Southeastern District wants to admit, here and now before this Court, that the costs of the clear water taking of Plaintiffs' rights are "construction costs" under the its Contract with the United States, and that it will indeed be obligated to pay one-half of the costs of securing the delivery of Plaintiffs decreed rights to them, and one-half of the costs of whatever taking Plaintiffs may prove in the Court of Claims, Plaintiffs have no objections. But, Plaintiffs do not want this Court to be misled by "claims" as opposed to facts.

Finally, if the District feels that its rights will be prejudiced by the United States' conduct of this case, and it has an interest in this case, then it should seek to intervene before the Court of Claims. It did not do so before the preparation of the certified question and statement of facts sent this Court by the Court of Claims, and it has not done so now. See, Rule 65 of the United States Court of Claims, "Intervention." If the Southeastern District wishes to stand silently by it should not be allowed to use its silent acquiescence in the United States actions as an excuse to attack the matters now before this Court.

The United States in its Brief on Rehearing quotes at great length from the planning report describing the Frying Pan-Arkansas Project. It points out the great benefits to be conferred by the project on Bessemer. If in fact the benefits described do exist, then this is for the Court of Claims to consider at the trial on damages. The Bureau of Reclamation will have an opportunity to prove these benefits instead of simply describing them in a self-serving document prepared to justify Congressional approval of the project.

III. RELIEF REQUESTED

Plaintiffs request that this Court reaffirm its decision in this matter and answer the question certified it by the United States Court of Claims in the affirmative.

Respectfully submitted this 16th day of October, 1978.

LEO S. ALTMAN, Reg. No. 942  
501 Thatcher Building  
Pueblo, Colorado 81002  
(303) 545-7235

Attorney for the Bessemer  
Irrigating Ditch Company

SAUNDERS, SNYDER, ROSS & DICKSON, P.C.

By Glenn G. Saunders  
Glenn G. Saunders, Reg. No. 180

By John M. Dickson  
John M. Dickson, Reg. No. 186

By Michael L. Pederson  
Michael L. Pederson, Reg. No. 7905  
802 Capitol Life Center  
225 East 16th Avenue  
Denver, Colorado 80203  
(303) 861-8200

Attorneys for all Plaintiffs  
except The Bessemer Irrigating  
Ditch Company

CERTIFICATE OF SERVICE

I do hereby certify that on the 16<sup>th</sup> day of October, 1978, I served the above and foregoing Answer Brief of Plaintiffs' Petition for Rehearing by mailing a true and correct copy of the same in the United States mail with the correct amount of postage addressed to the following persons:

Hank Meshorer,  
Trial Attorney,  
Department of Justice  
Land and Natural Resources Division  
P. O. Box 1656  
Denver, CO 80201

Charles J. Beise, Esq.  
1600 Colorado National Bldg.  
950 17th Street  
Denver, CO 80202

Kenneth Balcomb, Esq.  
Delaney & Balcomb  
Attorneys at Law  
P. O. Box 790  
Glenwood Springs, CO 81601

Frank E. Maynes, Esq.  
Maynes & Anesi  
Attorneys at Law  
P. O. Box 3420  
Durango, CO 81301

D. Monte Pascoe, Esq.  
Ireland, Stapleton, Pryor  
& Holmes, P.C.  
Suite 2017  
1700 Broadway  
Denver, CO 80290

John R. Little, Jr., Esq.  
Ralph O. Canaday, Esq.  
Office of the Regional Solicitor  
Department of the Interior  
P. O. Box 25007  
Denver Federal Center  
Denver, CO 80225

J. D. MacFarlane, Attorney General  
David W. Robbins, Deputy Attorney General  
3rd Floor  
1525 Sherman Street  
Denver, CO 80203

Leo S. Altman, Esq.  
Preston, Altman & Parlapiano  
524-550 Thatcher Bldg.  
Pueblo, CO 81002

Ms. Lois J. Schiffer  
Chief, General Litigation Section  
Department of Justice  
Land and Natural Resources Div.  
Ben Franklin Station  
P. O. Box 7415  
Washington, D.C. 20044

Mr. David L. Harrison  
Moses, Wittemyer, Harrison  
& Woodruff, P.C.  
P. O. Box 1440  
Boulder, CO 80306

  
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