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# Interstate Transfers of Water: Many a Slip 'Twixt the Cup and the Lip

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INTERSTATE TRANSFERS OF WATER:  
MANY A SLIP 'TWINX' THE CUP AND THE LIP

A Paper for the Conference of  
"Colorado Water Issues and Options:  
The Nineties and Beyond; Toward Maximum Beneficial Use of  
Colorado's Water Resources" - October 9, 1985

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In introduction, Ken Wright and I are both Coloradans, which influences our approach to this subject. While a few projects have planned to transfer water upstream to Colorado, the majority of projects attempt to transfer water downstream. Located at the top of the nation, and having developed less of its available water than California and Arizona, Colorado has little to gain and much to lose from interstate water transfers. Thus, we take the approach of looking primarily for the obstacles to interstate water transfers. This is not to say that interstate transfers should never, or will never, happen -- they happen all the time. Colorado transfers downstream large quantities of water simply as the rivers flow. It is not undesirable to have money come back to Colorado, particularly to the government, as the water flows out of the state. Yet whether one supports or opposes interstate water transfers, one must review the obstacles to those transfers.

As an overview, we will briefly describe various types of proposals and their physical implementation. Then we will turn to various sources of law which may provide obstacles to interstate transfers of water. We discuss these sources of law in different categories, starting with the interstate compacts and treaties, equitable apportionment, and a discussion of the

constitution, the commerce clause, and the anti-export statutes of states. Then we turn to the federal statutes and laws, and state statutes and case law, which may inhibit interstate transfers. Finally, I will discuss some economic and practical limits and inhibitions on interstate water transfers.

#### I. PHYSICAL PROPOSALS.

Proposals for interstate water transfers range in size and scope.

A very limited transfer was discussed in Sporhase v. Nebraska, 458 U.S. 941, 102 S.Ct. 3456, 73 L.Ed.2d 1254 (1982). Sporhase involved the transfer of water from one well 35 feet on the Nebraska side of the state line to 130 acres of corn and beans irrigated on the same farm on the Colorado side of the state line. The water table in this part of the Ogallala Aquifer slopes at 12.5 feet per mile from Colorado into Kansas, so ground water flows from Colorado into Nebraska at a rate of about one foot per day. The cone of depression, after pumping at a rate of 1,200 gallons per minute (gpm) for several months, extends only about one-third mile into Nebraska, but extends farther into Colorado due to the slope of the water table.

The Galloway Group, Ltd., proposal is an ambitious proposal to deliver 300,000 to 500,000 acre-feet per year from the Yampa and White Rivers in Colorado down

the Colorado well over 1,000 miles through the Colorado River Aqueduct, and to the San Diego County Water Authority. It involves a 40-year proposed lease of water to San Diego and the construction of a million acre-foot reservoir. Galloway might overfile for a reservoir decree and would probably build at the same site planned and decreed for the Juniper Reservoir of the Colorado River Water Conservation District. In contrast to Sporhase's groundwater, the Galloway proposal involves surface water directly under interstate compacts. See the attached map showing the Colorado River Basin.

Another yet more ambitious water transfer proposal is the Great Recycling & Northern Development or "Grand Canal," a hundred billion dollar proposal to export water from Canada's St. James Bay at the south end of Hudson Bay in Canada to Lake Superior on the Great Lakes and thence to the arid southwest United States. It has the support of Canada's Prime Minister, Brian Mulroney. A ten-mile dam across the mouth of St. James Bay would separate it from Hudson Bay and turn the bay into a freshwater lake. Some 40,000 cubic feet per second would be diverted toward the Great Lakes and the United States. There have been other proposals to bring water from the Great Lakes, leading to proposals for an interstate compact to prevent transfers out of the Great Lakes.

Years ago, the Parsons Company North American Water & Power Plan would have diverted enormous amounts of Alaskan water to the Southwest United States. Another massive scheme, to pipe water from the Columbia River to the west, was blocked by Washington's Senator Jackson, who got a prohibition on the Bureau of Reclamation even studying the project.

There are some enormous dams on the Missouri River mainstem.<sup>1/</sup> Montana's Fort Peck Reservoir, operational in 1940, has total storage of 19,000,000 acre-feet. North Dakota's Garrison, 1955, stores over 24,000,000 acre-feet. South Dakota's Oahe, completed in 1962, stores over 23,000,000 acre-feet. The Oahe was at one time proposed by Exxon for pumping to Wyoming's Powder River Basin for coal use and farther to Colorado's Western Slope for oil shale development in the Piceance Basin.

Coal and other slurry pipelines have been proposed. In 1981, South Dakota authorized the sale of water rights from the Missouri River to Energy Transportation Systems, Inc. (ETSI), for \$9,000,000 a year. Newspaper articles described potential payments of \$1.4 billion to South Dakota. The pipeline was intended to stretch from the Oahe Reservoir on the Missouri River to around Gillette in Wyoming's Powder River Basin and then up to 1,800 miles through Wyoming,

Colorado, Kansas, and Oklahoma to electric power plants in Arkansas and Louisiana. The ETSI proposal also proposed to use water, to the extent necessary, from the Madison aquifer in South Dakota. Other slurry pipelines have been proposed in Montana, which led to a law attempting to outlaw such schemes there, except with legislative approval.<sup>2/</sup>

W. R. Grace proposed a two billion dollar "aquatrain" pipeline to ship Colorado coal, and perhaps other materials, perhaps using recyclable plastic bags, to California, perhaps using deep or saline water from Colorado.

The range of proposals for transfers of water have been from the mundane to the sublime, from the reasonable to the ridiculous. Most proposals have never been accomplished, for a large set of good legal, political, and economic reasons. Let us turn then to some of the inhibitions which would-be transferors of water face, beginning with the interstate compacts and treaties.

## II. TREATIES AND INTERSTATE COMPACTS AND EQUITABLE APPORTIONMENT.

Treaties can come into play with international or interstate water transfers. The treaty with Mexico for delivery of Colorado River water has been cited as an inhibition to the quantity of water that can be transferred by the Galloway Group.<sup>3/</sup> Alaskan to



continental United States or Canadian to United States transfers could also be affected by treaties.

Colorado has as many interstate water compacts as any state. These interstate compacts have been negotiated with the consent of Congress and become state statutes of each of the states entering the compacts. Within Title 37, Article 61 is the Colorado River Compact; Article 62, the Upper Colorado River Compact; Article 63, the La Plata River Compact; Article 64, the Animas-La Plata Project Compact; Article 65, the South Platte River Compact; Article 66, the Rio Grande River Compact; Article 67, the Republican River Compact; Article 68, the Amended Costilla Creek Compact; and Article 69, the Arkansas River Compact.

Interstate water transfers are likely, for obvious reasons, to occur from water rich areas to water poor areas. Some of Colorado's rivers are so overappropriated that state statutes and cases would essentially prohibit transfers, but compacts could still come into play. For example, transfers from Kansas to Colorado on the Arkansas River, or even from Colorado downstream of the John Martin Reservoir to upstream of the John Martin Reservoir, can be inhibited by Article V.H. of the Arkansas River Compact, C.R.S. § 37-69-101.<sup>4/</sup> Article V.H. requires findings of fact

by the Compact Administration of non-injury by certain of these transfers. Article IV.D. of that Compact also can inhibit water transfers which might materially deplete in usable quantity or availability for use waters for the water users in Colorado and Kansas.<sup>5/</sup> These articles would probably come into play if, for example, the Amity Canal wished a major upstream or downstream transfer of its water rights, as has been rumored.

Some compacts allocate specific amounts for beneficial use within states and drainages. For example, the Republican River Compact, C.R.S. § 37-67-101, Article IV, states: "There is hereby allocated for beneficial consumptive use in Colorado, annually, a total of fifty-four thousand, one hundred (54,100) acre-feet of water." Colorado's allocation is divided among several basins. Arguments would obviously be available for opposition to transfers out of Colorado that beneficial use is required within each basin, that the use must be within the basin and cannot be transferred outside the basin or state, particularly by a private party.

The Upper Colorado River Compact and the Colorado River Compact have been extensively analyzed in connection with the Galloway proposal.<sup>6/</sup>

While we cannot go into full detail here, the analyses, supporting and opposing, show many hurdles to be overcome by the Galloway Group in its attempt to deliver water to San Diego. The Colorado River Compact, C.R.S. § 37-61-101, Article III(a) states:

There is hereby apportioned from the Colorado River System in perpetuity to the Upper Basin and to the Lower Basin respectively the exclusive beneficial consumptive use of 7,500,000 acre feet of water per annum. . . ." [Emphasis is added here and in all quotations where emphasis appears.]

Opponents argue that use in San Diego is not a beneficial consumptive use which can be charged to the Upper Basin, as the Galloway Group proposes.

Article III(e), perhaps the most often cited obstacle, states:

The States of the Upper Division shall not withhold water, and the States of the Lower Division shall not require the delivery of water, which cannot be reasonably be applied to domestic and agricultural uses."

The Upper Commission staff analysis concluded, at 22, "There is no need for a lease agreement to provide what is required under the terms of Article III(e)."

Article VIII, the second paragraph, states: "All other rights to beneficial use of waters of the Colorado River System shall be satisfied solely from the water apportioned to that Basin in which they are situate."

The Upper Colorado River Compact, C.R.S. § 37-62-101, also provides arguments against the Galloway proposal. Article III(a) of the Upper Colorado River Compact apportions, "from the upper Colorado river system in perpetuity to the states of Arizona, Colorado, New Mexico, Utah and Wyoming, respectively, the consumptive use of. . ." 50,000 acre-feet of water per annum to Arizona and specified percentages of remaining Upper Basin water to the other states. Article III(b)(1) states, "The apportionment is of any and all man-made depletions;" Article III(b)(2) says, "Beneficial use is the basis, the measure and the limit of the right to use;" and Article VI says, "The Commission shall determine the quantity of the consumptive use. . . in terms of man-made depletions of the virgin flow at Lee ferry. . . ." <sup>7/</sup>

The opponents argue since the man-made depletions are to occur in San Diego, the depletions must be charged to the Lower Basin and cannot give compact credit to the Upper Basin or its individual states. Supporters argue that the water stored in the reservoir becomes personal property and then can be moved to California with consumptive use credit upstream.

Article III(b)(3) of the Upper Compact can be argued to mean that any excess available from one state's non-use can be used first by another state in

the Upper Basin. Article IX(a) implies that Upper Basin reservoirs "for the purpose of. . . storing or regulating water in an upper signatory state for consumptive use in a lower signatory state [shall not be denied], when such use is within the apportionment to such lower state made by this compact." California is not a lower signatory state to the Upper Basin Compact, but IX(a) implies that storage for consumptive use in a lower state is not sanctioned unless the lower state is charged the consumptive use.

A chief argument in favor of states joining Galloway is, as stated by Galloway: "There is a widely accepted notion that, despite language in the Compact to the contrary, there is a time clock running on when the Upper Basin States must put water to beneficial use." It is hard to see how a lease between San Diego and Galloway, or San Diego, Galloway, and the State, could provide better assurance than Article XVI of the Upper Compact, which says:

The failure of any state to use the water, or any part thereof, the use of which is apportioned to it under the terms of this compact, shall not constitute a relinquishment of the right to such use to the lower basin or to any other state, nor shall it constitute a forfeiture or abandonment of such use.

The opposition of every state to the Galloway proposal even leads to standing problems on getting interpretations of the legal questions involved, for

example, if actions are needed in the U. S. Supreme Court for interpretation. The Galloway proposal has been opposed by the Colorado River Board of California, the Metropolitan Water District of Southern California, the Colorado River Commission of Nevada, the New Mexico Interstate Stream Commission, the Arizona Water Commission, the Governor of the State of Arizona, specifically threatening a lawsuit by the State of Arizona against any decision by the San Diego County Water Authority to contract with the Galloway Group, the Utah Board of Water Resources, the Colorado Water Conservation Board, and the Upper Colorado River Commission. In view of this unified opposition, the Galloway Group at the very least faces a long and difficult uphill battle.

Interstate compacts may be interpreted by the U. S. Supreme Court, or other courts. For example, in Texas v. New Mexico, 462 U.S. 554, 103 S.Ct. 2558, 77 L.Ed.2d 1, 51 U.S.L.W. 4805 (1983), the Court interpreted Article III(a) of the Pecos River Compact, which provides: "New Mexico shall not deplete by man's activities the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition." 51 U.S.L.W. at 4807. This case was under the supervision

of Special Master and Judge of the U. S. Court of Appeals for the Tenth Circuit, Jean Breitenstein for several years, and is now scheduled for trial before Special Master Charles Meyers in November 1985. The decisions arising from such interpretation may have bearing on transfers.

Another source of law for opposition to interstate transfers would be equitable apportionment cases, though these must be interpreted with an eye to any later decisions or interstate compacts.<sup>8/</sup> While the Colorado Fuel & Iron Corporation was not attempting an interstate sale of water, it was attempting to start using water in the upstream state, Colorado, as opposed to the historic use in the downstream state, New Mexico, in litigation which reached the United States Supreme Court as Colorado v. New Mexico, 459 U.S. 176, 103 S.Ct. 539, 74 L.Ed.2d 348 (1982), and \_\_\_ U.S. \_\_\_, 104 S.Ct. 2433, 81 L.Ed.2d 247 (1984), rehearing den'd, \_\_\_ U.S. \_\_\_, 1055 S.Ct. 19, 82 L.Ed.2d 915 (1984). In that case, Colorado's attempt to allow junior diversions by CF&I of waters of the Vermejo River were prevented after equitable apportionment litigation between the states. A Special Master decided in favor of apportioning Colorado 4,000 acre-feet per year on the bases that New Mexico could compensate for some or all of the Colorado diversions

through reasonable water conservation measures and the injury, if any, to New Mexico would be outweighed by the benefits to Colorado from the diversion. The United States Supreme Court held, to the contrary, that Colorado did not meet its burden of proving, by clear and convincing evidence (such as would place in the ultimate fact finder an abiding conviction that the truth of its factual contentions is "highly probable"), that Colorado should receive any of the Vermejo water.

While unusual, federal common law, and Congressionally mandated apportionment, may also come into play.

My former partner, Charles Beise, on behalf of Colorado water users, argued over the waters of the La Plata River in the U. S. Supreme Court at in Hinderlider v. LaPlata River and Cherry Creek Ditch Co., 304 U.S. 92, 58 S.Ct. 803, 82 L.Ed. 1202 (1938). There federal common law was held to give the U.S. Supreme Court jurisdiction to review and overturn the Colorado Supreme Court's holding that the Compact unconstitutionally took the property right of senior water users. Rotation of water deliveries by Colorado's State Engineer, pursuant to compact and contrary to the water decrees of Colorado, was approved.



Congress may vest a federal official, such as the Secretary of Interior, with the responsibility to administer the division of interstate streams. See the opinion in Arizona v. California, 373 U.S. 546, 564-567, 83 S.Ct. 1468, 10 L.Ed.2d 542 (1963), and the decree, 376 U.S. 340, 84 S.Ct. 755, 11 L.Ed.2d 757 (1964), in which the Court held, "Congress decided that a fair division of the first 7,500,000 acre-feet of such mainstem waters would give 4,400,000 acre-feet to California, 2,800,00 to Arizona, and 300,000 to Nevada; Arizona and California would each get one-half of any surplus." (10 L.Ed.2d 588). In such a case, obviously, his decisions could form obstacles to interstate transfers, as where California has already used its 4.4 million acre-feet.

### III. THE CONSTITUTION, COMMERCE CLAUSE, AND ANTI-EXPORT STATUTES.

Traditionally, many western states have had one of three types of statutes to prohibit or limit the exportation of water to other states. Some states have attempted to prohibit all interstate transportation of water; others have allowed exportation of water only upon a reciprocal basis, and some have allowed exportation of water only upon legislative approval.<sup>9/</sup> Many of these statutes were based on a theory of western state sovereignty over water and the belief and reliance on an old Supreme Court case that water was

not an article of commerce. Thus, they became highly vulnerable after Sporhase v. Nebraska ex rel. Douglas, 458 U.S. 941, 102 S.Ct. 3456, 73 L.Ed.2d 1254 (1982), reversing Nebraska ex rel. Douglas v. Sporhase, 208 Neb. 703, 305 N.W.2d 614 (1981), and saying ". . . that water is an article of commerce." The case dealt with groundwater, but the Court's dicta goes beyond groundwater. "[T]hat water is an article of commerce" raises, but does not answer, "the question whether Nebraska statute is unconstitutional." 458 U.S. 955. The Court found at 959, "The reciprocity requirement [of the Nebraska statute] does not survive the 'strictest scrutiny' reserved for facially discriminatory legislation," saying in a footnote:

The reciprocity requirement cannot, of course, be justified, as a response to another state's unreasonable burden on commerce.

The Sporhase decision has been reported in many law journal articles.<sup>10/</sup>

In holding water an article of commerce, the Court overruled that old Supreme Court case referred to above, Hudson County Water Company v. McCarter, 209 U.S. 349, 28 S.Ct. 529, 52 L.Ed. 828 (1908), which had relied on now overruled Geer v. Connecticut, 161 U.S. 519, 16 S.Ct. 600, 40 L.Ed. 793 (1896). Instead the Court followed its summary affirmance of City of Altus v. Carr, 255 F.Supp. 828 (W.D.Tex.) (summarily

affirmed), 385 U.S. 35, 87 S.Ct. 240, 17 L.Ed.2d 34 (1966). Presumably, at least now, no one would disagree that the water that ends up in a can of Coors beer is an article of commerce. See, e.g., C.R.S. § 37-81-103(3). The City of Altus case involved piping of underground water from Texas a short distance across the Oklahoma border to Altus, where it was needed for domestic and municipal use. The Court found the water to be personal property as it crossed the Texas line in a pipeline. The facts were really very close in the Altus and Sporhase cases.

Opponents to interstate water transfers will argue a distinction between groundwater in a pipe, such as in the City of Altus and the Sporhase decisions, or even in the El Paso vs. New Mexico instance, and massive surface water transfers subject to tight regulations of interstate compacts authorized and approved by Congress. The Sporhase Court recognized this difference, 458 U.S. at 956:

Second, the legal expectation that under certain circumstances each State may restrict water within its borders has been fostered over the years not only by our equitable apportionment decrees, see, e.g., Wyoming v. Colorado, 353 U.S. 953, 77 S.Ct. 865, 1 L.Ed.2d 906 (1957), but also by the negotiation and enforcement of interstate compacts.

Probably the most important point of Sporhase v. Nebraska is that not all interstate transfers of

water are easily prevented by a simple state statute against export. Of course, neither does the absence of a simple and effective statutory prohibition mean that very many entrepreneurs will be successful in transferring large amounts of water interstate. Thus the source of the title of this article, that there's many a slip 'twixt the cup and the lip.

There are now two important decisions following Sporhase v. Nebraska in the El Paso, Texas-New Mexico dispute, where Texas seeks New Mexican water for use in El Paso; City of El Paso v. Reynolds, 563 F.Supp. 379 (D. N.M. 1983), appealed to the Tenth Circuit, vacated and remanded, and 597 F.Supp. 694 (D. N.M. 1984). El Paso filed with the New Mexico State Engineer 326 permits to appropriate up to 296,000 acre-feet of water annually, which the State Engineer denied on the grounds of the New Mexico Constitution, a statute essentially prohibiting export of New Mexico groundwater, and the Rio Grande Compact. Finding the compact inapplicable, the court first found that the New Mexico essentially prohibitory statute did not meet the requirements of legitimate interstate commerce regulation under the Sporhase decision.

In the second decision, the court analyzed a newer New Mexico statute inhibiting export of water, Senate Bill 295, passed in 1983. Again, the New Mexico

District Court concluded, after evaluating the statutory six factors, of water shortages and availability water in the two states, applicable only to new appropriations of water to be used outside of New Mexico, the statute "creates an unconstitutional burden on interstate commerce." At 708. That the six factors would be applied exclusively to water transfers to other states was central to the decision.<sup>11/</sup> The State Engineer is now to consider the 326 applications filed by El Paso. Trial is scheduled in March of 1986. Ken Wright has been a consulting engineer in that case.

New Mexico was not the only state to pass legislation responding to Sporhase. Colorado, for example, passed provisions attempting to tie any use of surface or groundwater in other states to express authorization by interstate compact or credit as a delivery to another state pursuant to interstate compacts and to beneficial use. The 1983 amendment to C.R.S. § 37-81-101(3) requires findings that:

(a) The proposed use of water outside this state is expressly authorized by interstate compact or credited as a delivery to another state pursuant to section 37-81-103 or that the proposed use of water does not impair the ability of this state to comply with its obligations under any judicial decree or interstate compact which apportions water between this state and any other state or states;

(b) The proposed use of water is not inconsistent with the reasonable conservation of the water resources of this state; and

(c) The proposed use of water will not deprive the citizens of this state of the beneficial use of waters apportioned to Colorado by interstate compact or judicial decree.

An amendment to § 37-81-103(1) prohibits appropriations or diversions

unless the amount of water so diverted or appropriated and transported through or into such other state or states is credited as a delivery to such other state or states by Colorado, or water to which such other state or states may be or claim to be entitled from such interstate source under an existing interstate compact or otherwise. Water mixed with other substances in the process of forming a slurry for the purpose of transporting any substance as a suspended solid shall not be deemed to have lost its character as water.

Note that while § 101(3)(a) is in the disjunctive, using "or"s, that § 103(1) requires compact credit that is not currently provided for or recognized by Colorado River Basin states.

In 1985, the legislature passed House Bill 1070 in Colorado. Its Section 6 would add a new C.R.S. § 37-81-104, reading:

To effectuate the purposes of this article, the general assembly hereby authorizes a fee of fifty dollars per acre-foot to be assessed and collected by the state engineer on water diverted, carried, stored, or transported in this state for beneficial use outside this state measured at the point of release from storage or at the point of diversion.

Galloway's president and attorney have been quoted as not planning to challenge this statute.<sup>12/</sup> In

response to a request from State Engineer Jeris Danielson, Colorado Attorney General Duane Woodard issued his opinion on September 10, 1985, that this statute and fee are unconstitutional under the Sporhase line of decisions. At 11-12, Woodard summarized:

You have asked to what exports of water the fee of \$50 per acre-foot applies. I conclude that the fee cannot lawfully be assessed on any water exported from Colorado. First, Colorado is not entitled to impose a fee on any exports that are authorized by an interstate compact or judicial decree or are credited as a delivery by Colorado to another state pursuant to a compact or decree. Second, the imposition of a fee on water diverted, carried, stored, or transported in Colorado for use outside the state, when no fee is charged for use within the state, would violate the Commerce Clause of the United States Constitution.

Other states have also attempted to restrict use of water outside the state.

Montana has determined that the use of water for transportation of coal in a slurry pipeline is harmful to the protection and conservation of the state's water resources and so the use of water for coal slurry transport is not a beneficial use of water. Mont. Code Anno., § 85-2-104 (1981).

Colorado's fee on exported water may have been inspired in part by Montana's severance tax on coal, 90% of which is exported from the state, recently upheld in Commonwealth v. Montana, 453 U.S. 609, 101 S.Ct. 2946, 69 L.Ed.2d 884 (1981), reh. den., 453 U.S.

927, 102 S.Ct. 889, 69 L.Ed.2d 1023 (1981). The chief difference between that tax and Colorado's 1985 statute assessing a fee on water is that Colorado's fee applied only for water "for beneficial use outside this state. . . ."

South Dakota requires that the legislature must approve any application to appropriate water in excess of 10,000 acre-feet annually. S.D. Comp. Laws Anno., § 46-5-20.1 (Supp. 1982). Some analyses of the post-Sporhase situation do provide additional guidances as to what might be done in the way of legislation following that decision. Potential options include interstate compacts, denials of appropriation in the "public interest," in stream use appropriations or reservations, state appropriations of water for state use or state agency use, and the imposition of conditions on the right to change uses.<sup>13/</sup>

#### IV. FEDERAL STATUTES AND LAWS.

Developers must comply with many federal acts to accomplish certain major interstate water transfers. An example of the kind of analysis which may be required is that done by Watkiss & Campbell of Salt Lake concerning the Galloway proposal in their letter of April 9, 1984, to Mr. Jack Dunlop of Bonneville Associates. The following is largely a summary of that letter.



The Galloway proposal, for example, would include hydroelectric facilities, and so may require permits and approvals under the Federal Power Act, 16 U.S.C. § 797, et seq. Under the Federal Power Act, the Federal Energy Regulatory Commission ("FERC") grants licenses pursuant to 16 U.S.C. § 803(a), which provides:

(a) That the project adopted, . . . shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-powered development, and for other beneficial public uses, including recreational purposes; . . .

See also, e.g., Scenic Hudson Preservation Conference v. FPC, 354 F.2d 608 (2d Cir. 1965), cert. denied 384 U.S. 941 (1966).

Dams must be approved by the Army Corps of Engineers under Section 404 of the Clean Water Act of 1977, 33 U.S.C. § 1344. Individual 404 permits are granted on the basis of twelve factors found at 33 C.F.R. § 320.4, including considerations for wetlands, fish and wildlife, water quality, scenic and recreational values, and a public interest review. The litigation of the Public Service Company and Riverside Ditch concerning the interaction between permits for dam construction under Section 404 and the Endangered Species Act is an example of the difficulties a

developer can find arising out of such 404 process. Marshes that might provide resting grounds for whooping cranes a few days a year exist 250-300 miles downstream on the South Platte in Nebraska from a proposed dam on a very small tributary of the South Platte. The potential interference with the cranes has stymied the damming of a less than 5 c.f.s. tributary of the South Platte in Colorado for years. Riverside Irr. Dist. v. Stipo, 658 F.2d 762 (1981); Riverside Irr. Dist. v. Andrews, 568 F.Supp. 583 (1983); Riverside Irr. Dist. v. Andrews, 758 F.2d 508 (1985). Even in the third decision the Court had not reached the question of whether the dam would actually harm the habitat of the whooping cranes.

The National Environmental Policy Act, 42 U.S.C. § 4331, requires an environmental impact statement for "major federal actions" which might "significantly affect the quality of the human environment."

The Fish and Wildlife Coordination Act, 16 U.S.C. § 661, et seq., requires most applicants who would build a dam to consult with federal and state wildlife agencies and include in project plans measures for the minimization of wildlife losses. This might well bring in the U. S. Fish and Wildlife Service, the Department of Interior, the U. S. Army Corps of Engineers, the state wildlife agencies, and others.

The Endangered Species Act of 1973, 16 U.S.C. § 1531, et seq., has already demonstrated its power to shut down even a pet project of a U. S. Senate Majority Leader. If the Endangered Species Act could shut down the Tellico Dam on account of the snail darters, TVA v. Hill, 437 U.S. 153, 98 S.Ct. 2279, 57 L.Ed.2d 117 (1978), no development interest should assume that it can escape the plain language of the Endangered Species Act, and in particular, Section 7. Though it was amended in 1978, it remains of extreme danger to any development interest.

The Galloway proposal involves the historical habitat of the Colorado squawfish, the bony-tailed chub, and the humpback chub. One man's trash fish is another man's salmon. Various of these now endangered species were periodically deliberately dynamited as trash fish in Western Colorado. Of the Juniper Reservoir site, the Environmental Defense Fund Newsletter of September 1985 says:

The Yampa River is essential habitat for one of these [endangered fish] species widely known as the "Colorado Salmon" because it resembles Pacific Northwest salmon in its long spawning migrations. The White River is almost as important as the Yampa as a holding and rearing ground for these fish. The riverine habitats also provide havens for countless other species, including the great blue heron, golden and bald eagles, sandhill crane, and bobcat.

Attached are lists of some of the species in Colorado of concern to the Division of Wildlife.<sup>14/</sup> The Colorado Water Congress Special Project on threatened and endangered species is one of the most active projects in the country attempting to alleviate the problems to water developers caused by the Endangered Species Act.<sup>15/</sup>

The Wild and Scenic Rivers Act, 16 U.S.C. § 1271, et seq., requires all federal agencies to give consideration to potential wild and scenic river areas in the use and development of water resources. 16 U.S.C. § 1271(d). All the Green River within the State of Colorado and the Yampa River within the Dinosaur National Monument have been designated by Congress as potential additions to the National Wild and Scenic River System. 16 U.S.C. § 1276(38), (55).

The Federal Land Policy Management Act of 1976, 43 U.S.C. § 1701, et seq. ("FLPMA"), governs Bureau of Land Management or National Forest lands involved in projects. The act applies to all federal, state, and local departments and agencies and deals with permits for all rights of way across public lands. Licenses are based on policies of multiple use and sustained yield. 43 U.S.C. § 1732(b).

The "law of the river" of the Colorado River goes beyond compact law. It includes, for example, the

Colorado River Basin Project Act of 1968, 43 U.S.C. § 1521, et seq., 82 Stat. 887 (Public Law 90-537). Pursuant to Section 602(a) of this Act, the Secretary of Interior promulgated "Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs" (Operating Criteria). These criteria frequently call for a minimum release of 8.23 million acre-feet (m.a.f.) from Lake Powell. Articles II and III of the Operating Criteria deal both with Lake Powell and Lake Mead, and look to dry periods of record, estimated Upper Basin depletions, the Mexican Treaty, and Lee Ferry flows concerning reservoir and river levels and releases. Opponents to the Galloway proposal argue it violates the Operating Criteria.

In addition, one must also consider the Boulder Canyon Project Act of 1928, the Colorado River Storage Project Act of 1956, and the seven-party Water Agreement of 1931.

The Boulder Canyon Project Act, 43 U.S.C. § 617, 45 Stat. 1057, authorizes an apportionment between the Lower Basin states and virtually required California to limit its annual consumptive use to 4.4 million acre-feet of Lower Basin water. Section 617c(a).

The Colorado River Storage Project Act, 43 U.S.C. § 620, et seq., 70 Stat. 105 (Public Law 84-485) has led to Upper Basin construction of over 33 m.a.f. of

storage, including Lake Powell at 20 m.a.f., Flaming Gorge at 3 m.a.f., Navajo at 1 m.a.f., and Blue Mesa at .7 m.a.f. These reservoirs provide opponents the argument that no more storage is practically needed.

#### V. FEDERAL RESERVED WATER RIGHTS.

Federal reserved water rights can also take priority over new projects. Winters v. U.S., 207 U.S. 564, 28 S.Ct. 207, 52 L.Ed. 340 (1908); Arizona v. California, 373 U.S. 546 (1963), supra. Federal reserved rights claimed for Indians have not all been adjudicated. New interstate developments, such as the Animas-LaPlata Project, may be devoted largely to such Indian claims. National forest claims continue to be litigated. Of particular importance to the Galloway Group is the Dinosaur National Monument reserved rights claims which are currently on appeal to the Colorado Supreme Court. By far the largest reserved rights claimed in Colorado are for the Naval Oil Shale reserves. The water court has now denied the U.S. antedation for its claims of up to 200,000 acre-feet a year from the mainstream of the Colorado and the matter is on appeal to the Colorado Supreme Court. Reserved rights may also be claimed for wild and scenic rivers. Reserved rights for wilderness areas are being pushed, in part by the Sierra Club, though wilderness areas are above many developments and tend to preserve water for

the downstream developers. Colorado Springs' and Aurora's Homestake II Project has been delayed for years, however, because of wilderness area problems.

#### VI. STATE ACTS AND LAWS INHIBITING TRANSFERS.

Beyond laws attempting expressly to limit water export, there are other state statutes which may well limit water transfers. One of the most important inhibiting the Galloway transfer is the California Limitation Act. In response to Section 4(a) of the Boulder Canyon Project Act of 1928, California passed the California Limitation Act, March 4, 1929 (Chapter 16, Calif. Stats. 1929, p. 38), in which California agreed that the annual consumptive use of water from the Colorado River for use in the State of California should not exceed 4.4 million acre-feet of the waters apportioned to the Lower Basin states by the Colorado River Compact, plus not more than one-half of any excess or surplus waters unapportioned by compact. This California statute is also used to argue against the Galloway plan.

The state constitutions and statutes setting up the priority system are an inhibition on interstate water transfer plans on highly appropriated or overappropriated rivers. Water and decrees may simply be unavailable.<sup>16/</sup>

To the extent that water may not be newly appropriated for the project but must be changed from earlier decrees, all the non-injury requirements of change statutes such as C.R.S. § 37-92-305 apply.

Applicants must avoid drying up streams, by exchange or otherwise, in ways that would infringe, in change or original cases, against the many minimum stream flow decrees now held by state agencies such as the Colorado Water Conservation Board. See C.R.S. § 37-92-102(3).

Applicants must have the necessary intent to appropriate water, because speculative projects will not be awarded decrees.<sup>17/</sup>

Water administrators could be uncooperative, and a developer could find his water diverted by others, inadvertently or even illegally. Dam safety statutes could get in the way. Water quality statutes or decisions could interfere.<sup>18/</sup> Pueblo Reservoir faced \$100 million in claims because it had removed silt (a pollutant to some, a ditch and field sealant to others) from the steam. A-B Cattle Co. v. U.S., 196 Colo. 539, 589 P.2d 57 (1979). States now administer many federal environmental statutes, and can be tougher than the United States.

State laws other than water and environmental laws can get in the way. Slurry pipeline proposals have



largely gone dormant after the failure of Congress to pass statutes giving federal powers of eminent domain to the pipelines.<sup>19/</sup>

Legal obstacles, in short, are where you find them. As ingenious lawyers promote and oppose schemes, the law will evolve, largely in response to economic and practical pressures, to which we now turn.

## VII. PRACTICAL AND ECONOMIC PROBLEMS.

Even if a developer can shepherd his proposal through the formidable legal thicket, practical and economic problems remain. Ray Moses' recent talk on the Galloway proposal summarized: "The real problems are people problems. There is something in the psyche of the western pioneer that enrages him when anyone talks of taking any of his water, whether he is using it or not."<sup>20/</sup>

One of the most interesting problems for large Colorado River transfers is whether building an expensive new dam, about \$200 million, makes economic sense. Hydrologists have agreed since at least the 1950's that the law of diminishing returns makes additional reservoirs on the Colorado uneconomic, at least from a basin-wide or national perspective. Walter Langbein's estimate<sup>21/</sup>, from 1959, was that:

. . . Any increase in capacity will not increase the supply [of usable water in the Colorado River system]. Furthermore, this optimum is insensitive. There is no

significant gain in net regulation between 29 and 78 million acre-feet of capacity . . . . the gain in regulation to be achieved by increasing the . . . capacity appears to be largely offset by a corresponding increase in evaporation.

His table is printed below. In 1959 the existing capacity was 35 m.a.f.; the current capacity is about 36 m.a.f. in the Upper Basin alone, with a total river system capacity of about 60 m.a.f.:

Detention period (years)	Capacity of reservoirs in system (million acre-feet) <sup>1</sup>	Annual regulation (million acre-feet)	Annual evaporation (million acre-feet)	Net annual regulation (million acre-feet)
1.0.....	2 13	4.7	0.4	4.3
2.2.....	29	6.3	.8	5.5
3.0.....	39	6.8	1.1	5.7
4.0.....	52	7.2	1.4	5.8
5.0.....	65	7.6	1.8	5.8
6.0.....	78	7.9	2.1	5.8

<sup>1</sup>Based on annual flow of 13 million acre-feet.

<sup>2</sup>Approximate present [1959] main-stem development.

These projections do not, of course, deal with the benefits that might accrue to the region, state, locality, or developer from use at the new reservoir. They do suggest, however, that the benefits normally obtained by reservoirs which increased dependable basin yield, are probably not available here. If another

Colorado reservoir is not needed to create the dependable yield to San Diego, the same result to San Diego could be obtained by different administration of existing federal reservoirs. One cannot now foresee, however, the necessary cooperation among states and federal officials to, in effect, transfer space in these reservoirs to the credit and large monetary gain of Colorado or Galloway.

Other practical problems arise. How does one preserve and transport the water claimed? River administration may be lax in intervening states, and the water may be taken, for example, by poorly administered wells. Several state's water administrators, with little motivation to cooperate, must cooperate if Galloway is to succeed. Federal administrators of the reservoirs must also cooperate, despite questions of power production and payments therefor, recreation and loyalty to their own reservoirs and their fullness. In the event of flood, who spills? Who suffers how much evaporation and transit loss? What is the transit time and payments for interim storage? Are there necessary exchanges? Who runs them, and how, with what positive or "negative" transit losses?

## VIII. CONCLUSION.

There are many problems with interstate water transfers, some of which we have tried to illustrate. One can be sure that interstate water transfers will draw many objectors and generate many controversies. Many of the controversies are separate, and sufficient, one by one, to prevent the transfer. That is why many more transfers will always be proposed than accomplished.

With such a greasy cup, filled with such desirable ambrosia, with so many straws already sucking, and so many elbows jostling the newly arrived drinker, the ancient Greek proverb was surely right that "There's many a slip 'twixt the cup and the lip."

## FOOTNOTES

1. U. S. Army Corps of Engineers, "Lakes in the Missouri River Basin," Vital Statistics.
2. Mont. Code Ann. § 85-2-104 (1981). See Okla. Stat. Tit. 27, §§ 7.6 and 7.8; C.R.S. § 37-81-103(1) (1981 Supp.); 1978 Coal Pipeline Act: Hearings on S. 3046 before the Senate Subcommittee on Public Lands and Resources of the Commission on Energy and Natural Resources, 95th Cong., 2d Sess. (1978); Martz & Grazis, "Interstate Transfers of Water and Water Rights - the Slurry Issue," 23 Rocky Mtn. Min. L. Inst. 33 (1977); Note, Do State Restrictions on Water Use by Slurry Lines Violate the Commerce Clause, 53 U. Colo. L. Rev. 655 (1982).
3. The Mexican Water Treaty of February 3, 1944 (Treaty Series 994, 59 Stat. 1219) partly determines Colorado River allocations by virtue of the Colorado River Basin Project Act, 43 U.S.C. § 1512. That treaty also led to the Colorado River Basin Salinity Control Act, 43 U.S.C. § 1571, "to enable the United States to comply with its obligations under the agreement with Mexico of August 30, 1973 (Minute No. 242 of the International Boundary and Water Commission, United States and Mexico). . ." and that treaty.
4. C.R.S. § 37-69-101, Article V.H:

If the usable quantity and availability for use of the waters of the Arkansas river to water users in Colorado water district 67 and Kansas will be thereby materially depleted or adversely affected, (1) priority rights now decreed to the ditches of Colorado water district 67 shall not hereafter be transferred to other water districts in Colorado or to points of diversion or places of use upstream from John Martin dam; and (2) the ditch diversion rights from the Arkansas river in Colorado water district 67 and of Kansas ditches between the state line and Garden City shall not hereafter be increased beyond the total present rights of said ditches, without the administration, in either case (1) or (2), making

findings of fact that no such depletion or adverse effect will result from such proposed transfer or increase. Notice of legal proceedings for any such proposed transfer or increase shall be given to the administration in the manner and within the time provided by the laws of Colorado or Kansas in such cases.

5. C.R.S. § 37-69-101, Article IV.D:

This compact is not intended to impede or prevent future beneficial development of the Arkansas river basin in Colorado and Kansas by federal or state agencies, by private enterprise, or by combinations thereof, which may involve construction of dams, reservoirs and other works for the purposes of water utilization and control, as well as the improved or prolonged functioning of existing works: Provided, that the waters of the Arkansas river, as defined in article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this compact by such future development or construction.

6. Analyses of the Galloway proposal include a letter of September 11, 1984, from the Galloway Group, Ltd., to Governors Richard D. Lamm of Colorado, Scott M. Matheson of Utah, and Ed Herschler of Wyoming, with extensive discussion of legal issues, a 41-page "Upper Colorado River Commission Staff Analysis of The Proposal by Galloway Group, Ltd., to Lease Upper Colorado River Basin Water to San Diego County Water Authority, November 30, 1984," a 41-page legal opinion of Watkiss & Campbell, Salt Lake City, dated April 9, 1984, in a letter to Mr. Jack Dunlop of the Bonneville Associates, Inc., of Salt Lake, the Memoranda of the Chief Engineer and California Attorney General to the Colorado River Board of California of October 3, 1984, the Memorandum of the General Manager and General Counsel of the Metropolitan Water District of Southern California of October 1, 1984, an 11-page opinion of Jennings, Engstrand & Henrikson, San Diego, to the Board of Directors of San Diego Water Authority dated October 4, 1984; and a 22-page legal opinion of Davis, Graham & Stubbs, Denver, to Signal Capital

Corporation of November 14, 1984. See also a special report prepared by the Freshwater Society of Navarre, Minnesota, entitled, "Water Management in Transition 1985." See also an article by Richard Simms in the forthcoming proceedings of the 31st Rocky Mountain Mineral Law Institute on the Galloway proposal.

We are grateful to John Musick and others for providing these materials, which form much of the basis for this paper.

7. Article VI says in full:

The commission shall determine the quantity of the consumptive use of water, which use is apportioned by article III hereof, for the upper basin and for each state of the upper basin by the inflow-outflow method in terms of man-made depletions of the virgin flow at Lee ferry, unless the commission, by unanimous action, shall adopt a different method of determination.

8. Interstate equitable apportionment water decisions include Kansas v. Colorado, 185 U.S. 125, 22 S.Ct. 552, 46 L.Ed. 838 (1902); Kansas v. Colorado, 206 U.S. 46, 27 S.Ct. 655, 51 L.Ed. 956 (1907); Colorado v. Kansas, 320 U.S. 383, 64 S.Ct. 176, 88 L.Ed. 116 (1943), reh. den., 321 U.S. 803, 64 S.Ct. 633, 88 L.Ed. 1089 (1944); Wyoming v. Colorado, 259 U.S. 419, 42 S.Ct. 552, 66 L.Ed. 999 (1922); reh. den. and decree modified, 260 U.S. 1, 43 S.Ct. 2, 66 L.Ed. 1026 (1922); decree vacated, 353 U.S. 953, 77 S.Ct. 865, 1 L.Ed.2d 906 (1957); Arizona v. California, 373 U.S. 546, 83 S.Ct. 1468, 10 L.Ed.2d 542 (1963), decree entered, 376 U.S. 340, 84 S.Ct. 755, 11 L.Ed.2d 757 (1964); decree amended, 383 U.S. 268, 86 S.Ct. 924, 15 L.Ed.2d 743 (1966); disavowed by California v. U.S., 438 U.S. 645, 98 S.Ct. 2985, 57 L.Ed.2d 1018 (1973); Nebraska v. Wyoming, 325 U.S. 589, 65 S.Ct. 1332, 89 L.Ed. 1815 (1945); Missouri v. Illinois, 180 U.S. 208, 21 S.Ct. 331, 45 L.Ed. 497 (1901), 200 U.S. 496, 26 S.Ct. 268, 50 L.Ed. 572 (1906); Wisconsin v. Illinois, 289 U.S. 710, 53 S.Ct. 210, 77 L.Ed. 1465 (1933); Connecticut v. Massachusetts, 282 U.S. 660, 51 S.Ct. 286, 75 L.Ed. 602 (1931); New Jersey v. New York, 283 U.S.

336, 51 S.Ct. 478, 75 L.Ed. 1425 (1931), modified, 347 U.S. 995, 74 S.Ct. 842, 98 L.Ed. 1127 (1954); Vermont v. New York, 417 U.S. 270, 94 S.Ct. 2248, 41 L.Ed.2d 61 (1974).

9. Clyde, State Prohibition on the Interstate Exportation Scarce Water Resources, 53 U.Colo.L.Rev.529, 530 (1982). Examples were, and in most instances still are: Colo. Rev. Stat. § 37-81-101 (1973 & Supp. 1981); see Ch. 706, L. 1983, apparently repealing § 121 until July 1, 1985, 85-2-104 (1981); Neb. Rev. Stat. § 46-613.01 (1973), with reciprocity requirement stricken, State ex rel. Douglas v. Sporhase, 213 Neb. 484, 329 N.W.2d 855 (1983); Nev. Rev. Stat. § 533-515 (1979); N.M. Stat. Ann. § 72-12-19 (1978), repealed L. 1983, Ch. 2, § 7; Okla. Stat. Tit. 27, § 7.6 (West Supp. 1981), a restriction limiting coal slurry pipelines only; Or. Rev. Stat. § 537.810, requiring legislative approval for interstate transfers (1979); S.D. Comp. Laws Ann. § 46-5-20.1 (supp. 1981); Ut. Stat. Anno. § 73-2-8; Wash. Rev. Code Ann. § 90.03.300 (1962); Wyo. Stat. § 41-3-105, 115 (1977), repealed Laws, Ch. 167, § 2.

10. See, e.g., Corker, "Sporhase v. Nebraska ex rel. Douglas: Does the Dormant Commerce Clause Really Limit the Power of a State to Forbid (1) The Export of Water and (2) The Creation of a Water Right to Use in Another State?" 54 U.Colo.L.Rev. 393 (1983); Barnett, "Mixing Water and the Commerce Clause: The Problems of Practice, Precedent, and Policy in Sporhase v. Nebraska," 24 Nat. Res. J. 161 (1984); Tarlock, "So It's Not 'Ours' - Why Can't We Still Keep It? A First Look at Sporhase v. Nebraska," 18 Land & Water L. Rev. 137 (1983).

11. Senate Bill 295, N.M. Stat. Ann., § 72-12B-1 (Cum. Supp. 1984), required that the following six factors be applied to applications for the transportation and use of surface or undeveloped water outside, but not inside, New Mexico:

(1) the supply of water available to the state of New Mexico;



(2) water demands of the state of New Mexico;

(3) whether there are water shortages within the state of New Mexico;

(4) whether the water that is the subject of the application could feasibly be transported to alleviate water shortages in the state of New Mexico;

(5) the supply and sources of water available to the applicant in the state where the applicant intends to use the water; and

(6) the demands placed on the applicant's supply in the state where the applicant intends to use the water.

Various articles have also discussed the El Paso decision. See, e.g., Governor's Water Law Study Committee, DuMars, et al., "The Impact of Recent Court Decisions Concerning Water and Interstate Commerce on Water Resources of the State of New Mexico," 24 Nat. Res. J. 689 (1984); "Note, Commerce Clause Curbs State Control of Interstate Use of Groundwater: City of El Paso v. Reynolds," 24 Nat. Res. J. 213 (1984).

12. "Rocky Mountain News," p. 34, Colo. 2-3, May 24, 1985.
13. Barnett, "Mixing Water and the Commerce Clause: The Problems of Practice, Precedent, and Policy in Sporhase v. Nebraska," 24 Nat. Res. J. 161 (1984); Tarlock, "So It's Not 'Ours' - Why Can't We Still Keep It? A First Look at Sporhase v. Nebraska," 18 Land & Water Law Rev. 137 (1983). See Comment, Sporhase v. Nebraska ex rel. Douglas: State Control of Water under the Constraints of the Commerce Clause, 18 Land and Water Law Rev. 513 (1983).
14. For short reports on some of the Endangered Species Act developments, see 17 Nat. Res. L. 35, et seq. (1984), and Nat. Res. L. Annual Review of Significant Activities - 1982, pp. 233, et seq.










15. Contact Tom Pitts or Richard MacGreavy, 1390 Logan Street, Room 312, Denver, Colorado 80203.
16. Compare, e.g., Colorado River Water Conservation Dist. v. Vidler Tunnel Water Co., 197 Colo. 413, 594 P.2d 566 (1979), finding unappropriated water on the Colorado; with  
Bohn v. Kuiper, 195 Colo. 17, 575 P.2d 402 (1978), requiring augmentation for a ground water appropriation on the South Platte; with  
Lionelle v. Southeastern Colorado Water Conservancy District, 676 P.2d 1162 (Colo. 1984), holding against a new appropriation for a reservoir on the Arkansas River; and  
Southeastern Colorado Water Conservancy District v. City of Florence, 688 P.2d 715 (Colo. 1984), holding against a new surface appropriation on the Arkansas.
17. In re Bunger v. Uncompahgre Valley Water Users Ass'n., 192 Colo. 159, 557 P.2d 389 (1976), Rocky Mountain Power Co. v. Colo. River U.C.D., 646 P.2d 383 (Colo. 1982).
18. See, e.g., City of Westminster v. Illinois and Michigan, 451 U.S. 304, 101 S.Ct. 1784, 68 L.Ed.2d 114 (1981); State v. Sims, 341 U.S. 22, 71 S.Ct. 557, \_\_\_ L.Ed.2d \_\_\_ (1981)
19. See, e.g., Coal Pipeline Carriers: Hearings on H.R. 4370 before the Subcommittee on Surface Transportation of the House Committee on Public Works and Transportation, 96th Cong., 1st Sess. (1979).
20. Raphael J. Moses, "The Galloway Question: Is the Colorado Line a Barrier to the Transfer of Water?" July 31, 1985.
21. Langbein, "Water Yield and Storage in the United States," U. S. Geological Survey Circular 409, particularly p. 4. See similarly, Harrison, "Potential United States Water-Supply Developments," J. Irr. & Drainage Div., Proc. ASCE at 479, Sept. 1972.

Echo Park

Dewey

Yampa River Reservoir #1

Whitewater

- EXPLANATION**
-  Irrigable Land (Land which could be irrigated)
  -  Irrigated Land
  -  Potential Reservoir Sites
  -  Existing Reservoirs
  -  Cities of 10,000 or over
  -  Cities and Towns under 10,000
  -  State Capitals
  -  Potential Export Diversion
  -  Existing Export Diversion

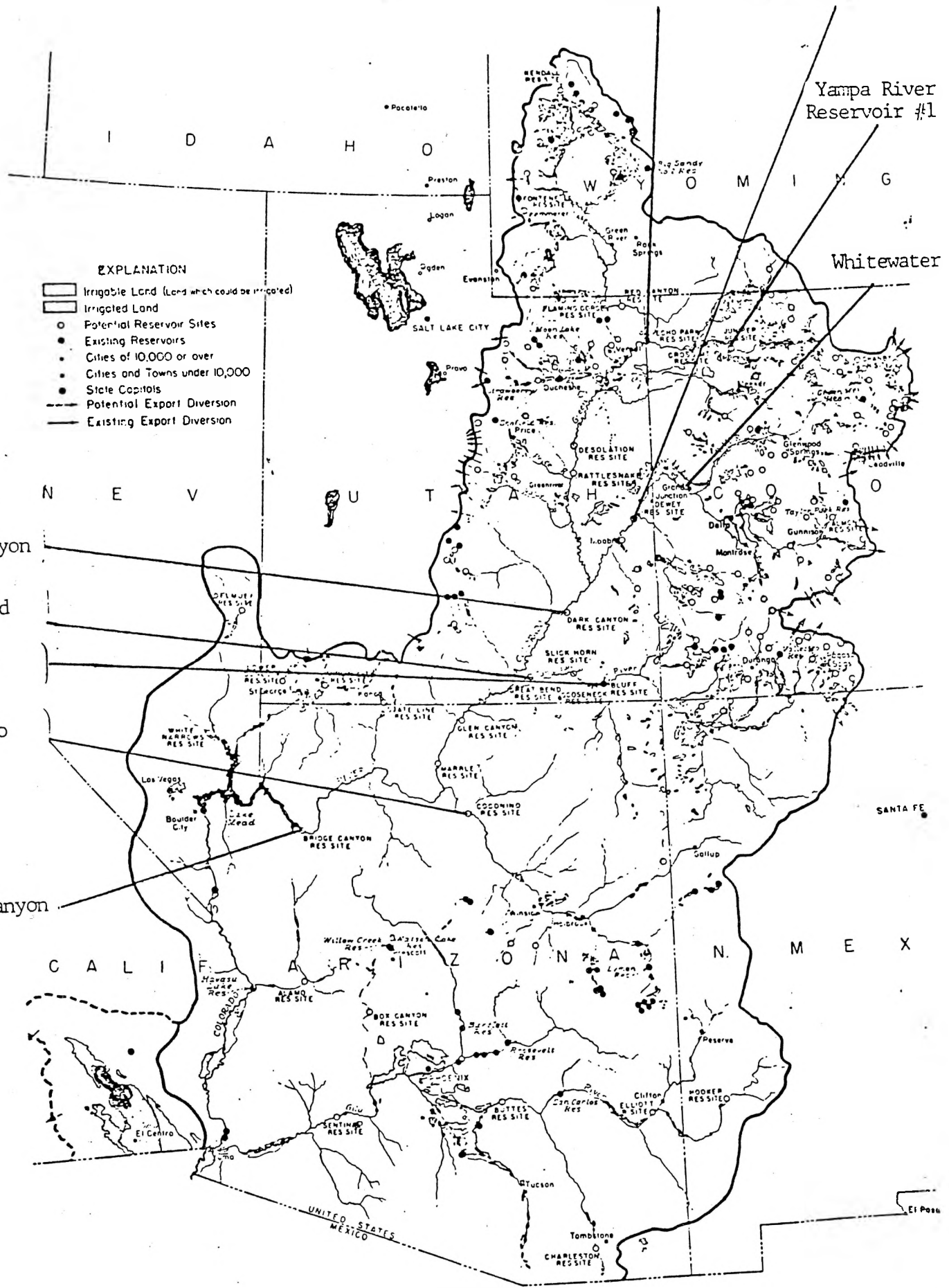
Dark Canyon

Great Bend

Bluff

Coconino

Bridge Canyon



COLORADO RIVER BASIN

# DIVISION OF WILDLIFE

James B. Ruch, Director  
 6060 Broadway  
 Denver, Colorado 80216 (297-1192)



September 1984

## RECOMMENDED STATUS CHANGE

<u>Common name</u>	<u>Scientific name</u>	<u>Recommended status</u>
1. Rio Grande sucker	<u>Catostomus plebius</u>	special concern
2. Central johnny darter	<u>Etheostoma nigrum</u>	special concern
3. Plains orangethroat darter	<u>Etheostoma spectabile pulchellum</u>	special concern
4. Iowa darter	<u>Etheostoma exile</u>	special concern
5. Arkansas River speckled chub	<u>Hybopsis aestivalis tetranema</u>	special concern/extirpated
6. Northern redbelly dace	<u>Phoxinus eos</u>	threatened
7. Southern redbelly dace	<u>Phoxinus erythrogaster</u>	threatened
8. Plains minnow	<u>Hybognathus placilus</u>	special concern
9. Common shiner	<u>Notropis cornutus</u>	threatened
10. River shiner	<u>Notropis blennius</u>	special concern
11. Suckermouth minnow	<u>Phenacobius mirabilis</u>	special concern
12. Brassy minnow	<u>Hybognathus hankinsoni</u>	special concern
13. Stonecat	<u>Noturus flavus</u>	special concern
14. White pelican	<u>Pelecanus erythrorhynchos</u>	special concern
15. Great blue heron	<u>Ardea herodias</u>	special concern
16. Black-crowned night heron	<u>Nycticorax nycticorax</u>	special concern
17. Lynx	<u>Felis lynx</u>	threatened
18. Wolverine	<u>Gulo gulo</u>	threatened
(19. Boreal owl)	<u>Aegolius funereus</u>	--- --- <sup>a)</sup>

<sup>a)</sup> This species was nominated by a single reviewer and did not go through the entire review process. We recommend no status change this year, and a re-consideration next year.

*This is a draft summary table; add: Arctic peregrine (endangered or threatened) and a name change for one of the prairie chickens; there are also the bird changes, however.*

ATTACHMENT 2



<u>Common Name</u>	<u>Scientific Name</u>	<u>Present Status (1)</u>	<u>Recommended Status</u>	<u>Known Location (2)</u>
Suckermouth minnow	<u>Phenacobius mirabilis</u>	Sport	Special Concern	South Platte River between Sterling and the State Line; has been sampled at 12 separate sites in that reach
Brassy minnow	<u>Hybognathus hankinsoni</u>	Sport	Special Concern	Known to occur in the South Platte Basin
Stonecat	<u>Noturus flavus</u>	Sport	Special Concern	Probably occurs in the South Platte Basin
White pelican	<u>Pelecanus erythrorhynchos</u>	Threatened	Special Concern	Riverside Reservoir, Sterling Reservoir
Great blue heron	<u>Ardea herodias</u>	Nongame Species	Special Concern	Known to occur throughout the northern South Platte Basin and on the Front Range
Black-crowned night heron	<u>Nycticorax nycticorax</u>	Nongame	Special Concern	Unknown; is a marsh bird

- (1) By statute, practically all species are classified as sport fish in Colorado.  
(2) Locations where species are known to occur; they may also occur in other areas.



RECOMMENDED STATUS CHANGE

<u>Common Name</u>	<u>Scientific Name</u>	<u>Present Status (1)</u>	<u>Recommended Status</u>	<u>Known Location (2)</u>
Rio Grande sucker	<u>Catostomus plebius</u>	Sport	Special Concern	Rio Grande Basin
Central johnny darter	<u>Etheostoma nigrum</u>	Threatened	Special Concern	South Platte Basin
Plains orangethroat darter	<u>Etheostoma spectabile pulchellum</u>	Threatened	Special Concern	South Platte Basin
Iowa darter	<u>Etheostoma exile</u>	Sport	Special Concern	South Platte Basin
Arkansas River speckled chub	<u>Hybopsis aestivalis tetranema</u>	Threatened	Special Concern/ <i>Extirpated</i>	Warm water Arkansas River fish, not encountered since 1913
Northern redbelly dace	<u>Phoxinus enos</u>	Sport	Threatened	West Plum Creek and Garver Creek in Douglas County
Southern redbelly dace	<u>Phoxinus erythrogaster</u>	Sport	Threatened	Near Pueblo at two locations: (a) spring-fed slough T20 <del>8</del> R65W, Section 33; (b) west of Pueblo Blvd. & south south of the Arkansas River
Plains minnow	<u>Hybognathus placitus</u>	Sport	Special Concern	South Platte Basin
Common shiner	<u>Notropis cornutus</u>	Sport	Threatened	Known to occur in the South Platte Basin
River shiner	<u>Notropis blennius</u>	Sport	Special Concern	Arkansas River warm water fish