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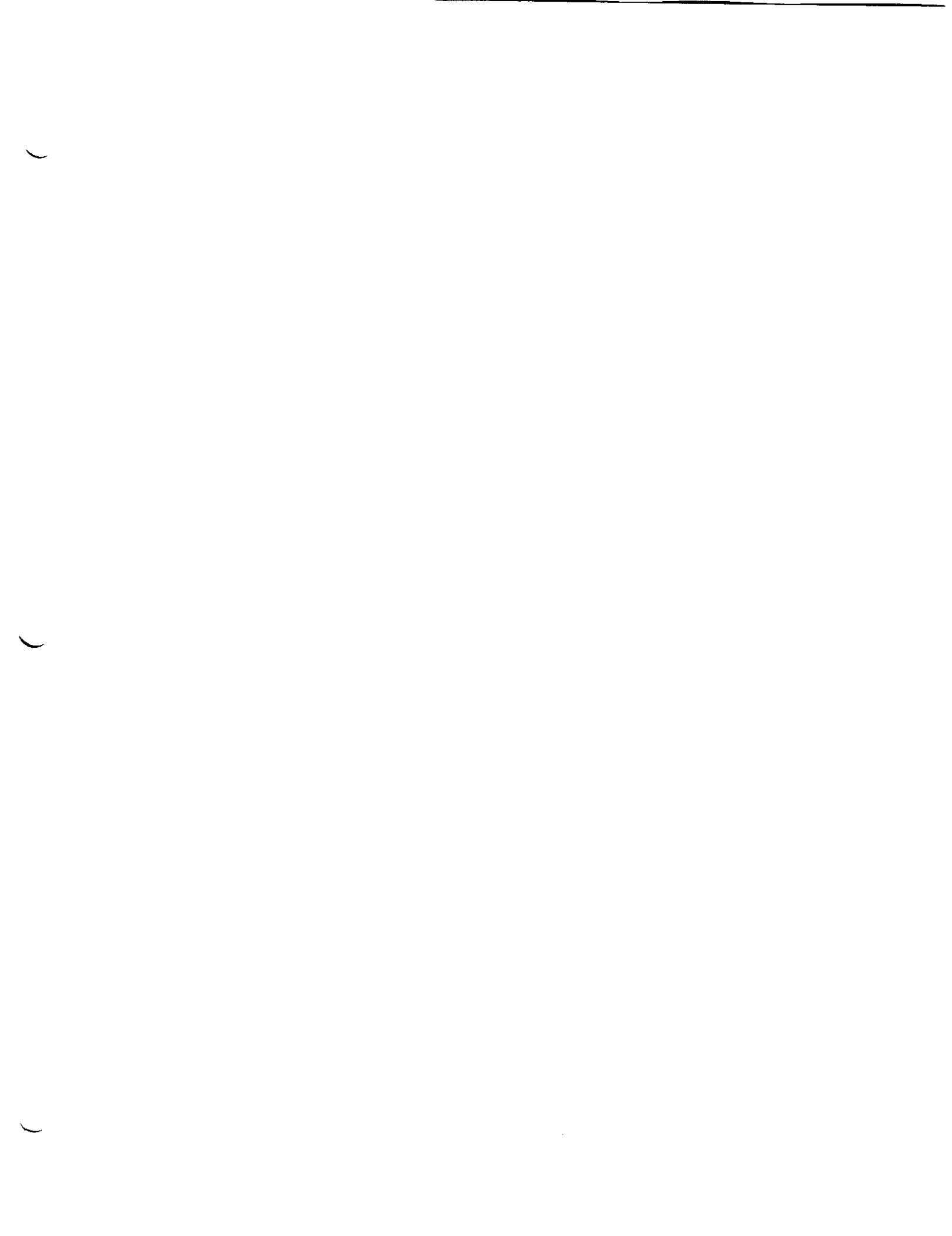
Water Rights Implications of Water Quality
Regulation in Colorado

Lawrence J. MacDonnell

Director
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Water Quality Control: Integrating Beneficial Use
and Environmental Protection

Natural Resources Law Center
University of Colorado School of Law
June 1-3, 1988



Water Rights Implications of Water Quality

Regulation in Colorado

Lawrence J. MacDonnell

I. Introduction

A. Summary

It is a fundamental principle of Colorado water law that a water right is conditioned by the requirement that use of water in the exercise of that right cannot impair or injure another's entitled use of water. This principle has been applied directly to restrict uses of water resulting in pollution which cause injury to other water uses. In addition, Colorado has enacted legislative provisions to protect beneficial uses of water.

Present Colorado law inadequately addresses the relationship between water use and water quality. Only in limited instances is water quality considered in water rights decisions. Moreover, water quality decisions are overly restricted in the name of protecting water rights.

Plainly, the exercise of water rights can affect water quality. The significance of these effects should be considered at the time water rights decisions are made, and unreasonable effects should be prohibited.

In implementing water quality programs the importance of safeguarding beneficial uses of water should be emphasized. Interference with the beneficial use of water under a water right should be absolutely minimized, but it must be permitted within due process limits where necessary to achieve bona fide water quality objectives.

B. General References

1. White, "The Emerging Relationship Between Environmental Regulations and Colorado Water Law," 53 U. Colo. L. Rev. 597 (1982).

2. Hughes, "Amendments to the Colorado Water Quality Control Act," 10 Colo. Lawyer 2759 (1981).

3. Laitos, "Conflicts Between Water Rights Administration and Water Quality Protection," Conference on Water as a Public Resource: Emerging Rights and Obligation (Natural Resources Law Center, 1987).

4. Pifher, "Quality Versus Quantity: The Continued Right to Appropriate," 15 Colo. Lawyer 1035 (part 1) and 1204 (part 2) (1986).

5. Harrison & Woodruff, "Accommodations of the Appropriation Doctrine and Federal Goals Under Sections 208 and 404 of Public law 92-500 and Section 10 of the Rivers and Harbors Act of 1899," 22 Rocky Mt. Mineral Law Inst. 941 (1976).

II. Common Law Applying to Water Use and Water Quality in Colorado

A. In Larimer County Reservoir Co. v. People ex rel. Luthé, 9 P. 794, 796 (1886) the Colorado Supreme Court noted that the right to divert is a "privilege," qualified by the fact that an appropriation of water "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"

B. Cushman v. Highland Ditch Co, 33 P. 344 (Colo. Ct. App. 1893) repeats the general rule that senior appropriators are protected both in quantity and quality ("there is no question that riparian owners and these prior appropriators of water are entitled to have the St. Vrain Creek flow unimpaired in quantity and unpolluted in any permanent and unreasonable way") but

allows construction of a reservoir in a highly alkaline slough by a downstream junior ditch company against the complaint by senior appropriators located below the dam that the highly alkaline water would harm their irrigation and domestic uses. Absent a demonstration of actual injury the court was reluctant to prevent this effort to enlarge the usable supply of water.

C. Suffolk Gold Mining & Milling Co. v. San Miguel Consolidated Mining & Milling Co., 48 P. 828 (Colo. Ct. App. 1897) involved a conflict between two users of the same stream. The senior user (Suffolk) operated a stamp mill and used the water as a source of power as well as in crushing and concentrating the ore following which the water carrying tailings was returned to the stream. The junior user (San Miguel) took water at a downstream location via a pipe for power purposes. San Miguel complained of injury to its power generating equipment from the tailings discharged by Suffolk.

Again the court noted that an appropriative water right in Colorado is "qualified as to its rights with respect to third persons." At 830. Furthermore, "the title to the waters of the state always remains, in a measurable sense, in the people, and any citizen has a right to use the waters flowing along the streams within our boundaries for any of the uses which the

constitution recognizes." Id. Thus senior appropriators do not possess a right to make unreasonable uses of water to the clear detriment of subsequent appropriators.

Under these circumstances, we are quite of the opinion that the title and rights of the prior appropriating company were not absolute, but conditional, and they were obligated to so use the water that subsequent locators might, like lower riparian owners, receive the balance of the stream unpolluted, and fit for the uses to which they might desire to put it. At 832.

This protection extends not only to those presently holding junior rights but to all unappropriated water as well. Reasonable use in this case appears to be measured by how difficult or expensive it would be to prevent the pollution.

D. Humphreys Tunnel & Mining Co. v. Frank, 105 P. 1093 (Colo. 1909) involved the factually easier situation of a downstream senior whose use of water for agricultural purposes was harmed by tailings discharged into the stream by the upstream junior in connection with the operation of an ore reduction mill. In this situation the court was able to say:

Upon general principles of law it is so entirely clear that defendant is liable in damages for this pollution of the stream which has injured plaintiff, that we do not cite authorities or deem it necessary to argue such a self-evident proposition. At 1095.

E. Wilmore v. Chain O'Mines, 44 P.2d 1024 (Colo. 1934) involved a suit brought by downstream agricultural water users on Clear Creek against the owners of upstream ore reduction mills, alleging irreparable damage to land and crops and to the usability of their water for irrigation and domestic purposes due to tailings discharged into the creek.

The trial court found "immeasurable and irreparable" damage and limited discharge of tailings to no more than 670 tons per day -- an amount tentatively picked as being "reasonable."

The supreme court began by citing Suffolk for the proposition that no appropriator, whether senior or junior, has the right to pollute a stream ("whatever rights might be claimed by the defendant owners, they cannot justify the claim of a right to pollute the waters of this natural stream." At 1027.) Finding clear evidence of immeasurable and irreparable damage, the court held that the injunction "should have been made full and permanent against any and all pollution...." Id.

On rehearing, the court provided a definition of "pollution" ("an impairment, with attendant injury, to the use of water that plaintiffs are entitled to make." At 1029) and then went on to clarify its holding: "In reality, the thing forbidden is the

injury. The quantity [of pollution] introduced is immaterial." Id.

Thus, Wilmore stands for the proposition that water use in Colorado resulting in pollution injuring another's use of water may be prohibited.

F. Farmers Irrigation Company v. Colorado Game and Fish Commission, 369 P.2d 557 (Colo. 1962) holds that pollution of water by a state agency operating a fish hatchery may constitute a taking of another appropriator's water right requiring full compensation.

III. Statutory Restrictions on Water Pollution

A. Earlier Approaches

1. Protection of municipal drinking supplies

a. A statute originally enacted in 1877 empowered municipal authorities to protect from pollution the stream from which their water supply is derived. It authorized cities to regulate activities in areas along the stream five miles above the point where water is diverted.

b. Use of this authority to enact an ordinance prohibiting construction or use of a pigsty adjacent to the banks of a city's water supply within the five mile area was upheld in City of Durango v. Chapman, 60 P. 635 (Colo. 1900).

c. Recently, use of the authority to require anyone seeking to undertake new activities within a city's designated watershed district to obtain a permit from the city was facially approved in Mt. Emmons Mining Co. v. Town of Crested Butte, 690 P.2d 231 (Colo. 1984).

d. In 1907, the city of Denver was given special authority to safeguard water quality in the South Platte River, Bear Creek, or any of their tributaries above Clear Creek. See City and County of Denver v. District Court, 342 P.2d 648 (Colo. 1959). This authority was repealed in 1967.

2. Control of mine tailings

a. An 1868 Colorado territorial statute required that tailings be controlled on the mining property and established liability for damages caused by escape of such tailings. See C.R.S. 34-48-103(1973).

b. The dissent in Wilmore v. Chain O'Mines, 44 P.2d 1024, 1030 (1935) argued that a 1921 update of this statute should have limited the remedy to damages rather than a full injunction.

3. Protection of fish

A statute aimed at providing protection for fish was enacted in 1899. In amended form, it gave the Colorado Game and Fish Commission authority to go

to court to find a remedy for the injurious pollution. This statute was repealed in 1984.

4. Prohibition of certain types of discharges

a. Colorado has enacted two statutes prohibiting certain types of discharges to its streams. The first was enacted in 1874 and prohibited the discharge into streams or ditches of

any obnoxious substances, such as refuse matter from slaughterhouse or privy, or slops from eating houses or saloons, or any other fleshy or vegetable matter which is subject to decay in the water....

This provision was repealed in 1967.

The second, enacted in 1889, made it a misdemeanor to cause oil, petroleum or other oleaginous substance to enter waters of the state. This provision also was repealed in 1967.

b. The constitutionality of the earlier statute as a valid exercise of the police power of the state was upheld in People v. Hupp, 123 P. 651 (Colo. 1912). An action under the statute had been filed against the operators of a hotel in Estes Park which was using the Big Thompson River to carry away refuse of various kinds.

**5. Condemnation authority not usable to
pollute public streams**

a. Mack v. Town of Craig, 191 P. 101 (Colo. 1920) denied the use of condemnation authority to allow a city to go beyond its boundaries and condemn property for sewer purposes. Municipalities were held to be subject to the prohibition against pollution of public waters by discharging sewage or any other obnoxious substance.

b. Similarly, in City and County of Denver v. District Court, 342 P.2d 648 (Colo. 1959), the court denied the right of Glendale to condemn Cherry Creek to carry its sewage.

**B. Development of Comprehensive Water Pollution
Control Legislation**

1. The legislation

a. The first comprehensive legislation enacted in Colorado was the Colorado Water Pollution Control Act of 1966, 1966 Colo. Sess. L., Ch. 44.

b. This law was substantially revised in 1973 by the Colorado Water Quality Control Act, 1973 Colo. Sess. L., Ch. 210. A water quality control commission was established and charged with classifying state waters, establishing water quality standards, and promulgating regulations governing a point source discharge permit system, among other things.

c. The 1973 law, as substantially amended by Senate Bill 10 in 1981 (1981 Colo. Sess. L., Ch.324, p.1310 codified at C.R.S. 25-8-101 at seq.), provides the framework governing water quality regulation in Colorado. A good discussion of the important changes introduced by SB10 is provided in Hughes, "Amendments to the Colorado Water Quality Control Act," 10 Colo. Law. 2759 (1981).

2. Summary of the Colorado framework

a. The Colorado system parallels the federal requirements as necessary for state administration of the federal program. No discharge of any pollutant from a point source is allowed without a permit. Permits are issued by the Water Quality Control Division under regulations promulgated by the Water Quality Control Commission. The permit restricts discharges to technology-based effluent limitations. Stricter requirements may be imposed if necessary to achieve water quality standards. C.R.S. 25-8-501 to 507 (1982 Repl. and 1987 Supp.).

b. State waters are classified according to the uses for which they are presently suited or intended to become suitable. Classifications include (a) recreation (class 1-primary contact and

class 2-secondary contact), (b) agriculture, (c) aquatic life (class 1-cold water aquatic life, class 1-warm water aquatic life, class 2-cold and warm water aquatic life), (d) domestic water supply (class 1-uncontaminated groundwater, class 2-waters requiring disinfection and/or standard treatment), and (e) existing high quality waters (class 1, class 2).

"Classifications should be for the highest water quality attainable. Attainability is to be judged by whether or not the use classification can be attained in approximately twenty (20) years by any recognized control techniques that are environmentally, economically, and socially acceptable as determined by the Commission after public hearings." 5 C.C.R., 1002-8, Rule 3.1.6(e).

c. As stated in EPA regulations (40 CFR Section 131.2),

a water quality standard defines the water quality goals of a water body, or portion thereof, by designating use or uses to be made of the water and by setting criteria necessary to protect the uses.

The Water Quality Control Commission has established "basic standards" which apply to all waters of the State. 5 C.C.R 1002-8, Rule 3.1.11 (1987). The commission has adopted "numeric values" for specific water quality parameters for classified stream segments. Numeric standards are adopted as the limits for chemical constituents and other parameters necessary to protect adequately the classified uses in all stream segments. 5 C.C.R. 1002-8, Rule 3.8.8(V) (1981).

The commission presently is involved in revising its antidegradation standard.

The relationship between water quality and stream flows is recognized in several ways. A flow level below which water quality standards are not in force is set by the "minimum annual average seven-consecutive-day flow expected to occur once in ten years" (7Q10). Discharge regulations may be based on a seasonal average low flow rather than an annual average low flow. The "mixing zone" concept is followed by which water quality standards do not apply directly at the point of discharge. 5 C.C.R. 1002-8, Rule 3.1.17, p.A39.

d. The Water Quality Control Division is directed to engage in a monitoring program "to determine the quality of every reasonably accessible segment of state waters...." C.R.S. Section 25-8-303. The division is authorized to inspect any place which is a suspected source of water pollution. C.R.S. Section 25-8-306. An administrative procedure is established for review of alleged violations of state requirements. Notice must be given and a public hearing may be held. Civil penalties are provided for violation of any provision of the Colorado act. Criminal prosecution also is provided for any person who "recklessly, knowingly, intentionally, or

with criminal negligence discharges any pollutant into state waters..." C.R.S. Section 25-8-609.

e. Groundwater regulations were promulgated in 1987. The proponent of an "activity" that is now discharging or may discharge pollutants to groundwater not otherwise regulated apparently must seek commission designation of a "specified area" and the classification of groundwater within that area. There are five possible classifications: domestic use-quality, agricultural use-quality, surface water quality protection, potentially usable quality, and limited use and quality. Presumably, an activity that would violate the standards that are established would not be permitted. Provision is made for variances "on a case-by-case basis."

C. Water Quality Considerations in Water Rights Allocation

1. The Colorado Ground Water Management Act, which governs development of groundwater in designated basins, authorizes the Colorado Ground Water Commission to deny a permit application if the proposed development would impair uses under existing water rights. Impairment is defined to include "the unreasonable lowering of the water level, or the unreasonable deterioration of water quality, beyond

reasonable economic limits of withdrawal or use."

C.R.S. 37-90-107(5).

2. Colorado law permits a water user to take the water to which another is entitled so long as a "substituted supply" of an equivalent amount of water is provided. This can be done under a state engineer-approved substitute plan (C.R.S. 37-80-120), a court-approved plan for augmentation (C.R.S. 37-92-305(5)), or a privately arranged exchange (C.R.S. 37-83-104). Under a substitute supply plan, "[a]ny substituted water shall be of a quality and continuity to meet the requirements of use to which the senior appropriator has normally been put."

C.R.S. 37-80-120(3) (emphasis added). Under the augmentation plan, "[a]ny substituted water shall be of a quality and quantity so as to meet the requirements for which the water of the senior appropriator has normally been used...." C.R.S. 37-92-305(5) (emphasis added).

IV. Colorado Approach to Water Rights and Water Quality

A. In Relation to Water Quality Regulation

1. Statutory provisions

(a) General policy directives

(1) The legislative declaration

states:

it is declared to be the policy of this state to prevent injury to beneficial uses made of state waters, to maximize the beneficial uses of water, and to develop waters to which Colorado and its citizens are entitled and, within this context, to achieve the maximum practical degree of water quality in the waters of the state consistent with the welfare of the state. C.R.S. 25-8-102(1).

(2) Legislative intention to

protect water rights is made explicit in

C.R.S. 25-8-104:

No provision of this article shall be interpreted so as to supercede, abrogate, or impair rights to divert water and apply water to beneficial purposes in accordance with ... [Colorado Law]. Nothing in this article shall be construed, enforced, or applied so as to cause or result in material injury to water rights.

(3) This expression of intent is

modified by legislative recognition "that this article may lead to dischargers choosing consumptive types of treatment techniques in order to meet water quality requirements." In such case the discharger must "remedy any material injury to water rights to the extent required ..." The determination of injury and

the necessary remedy thereto is to be made by the water court.

(4) The expression of intent is further modified to insure that point source permits required to protect public health may be issued.

(b) Regarding classification of waters/water quality standards

(1) In classifying state waters the commission is to consider, among other things,

[t]he need to protect the quality of the water for beneficial uses such as domestic, agricultural, municipal, and industrial uses, the protection and propagation of fish and wildlife, recreation, drinking water, or other such beneficial uses as the commission deems consistent with the policies of Section 25-8-102 and the need to minimize negative impacts on water rights
... C.R.S. 25-8-203(e).

(2) Water in ditches and other man-made conveyance structures is not to be classified. Water quality standards are not to be applied to such waters "but may be utilized for purposes of discharge permits." C.R.S. 25-8-203(f).

(3) In promulgating water quality standards the commission is to consider, among other things, "the impact of treatment requirements upon water quantity...." C.R.S. 25-8-205(b).

(4) Water quality standards may only apply to discharges from water diversion, carriage, exchange, or to storage or release of water in

the exercise of water rights if control regulations have been established for that purpose.

C.R.S. 25-8-503(5).

(c) Regarding point source regulation

(1) Specifically excluded from point source regulation are "[a]ctivities such as diversion, carriage, and exchange of water from or into streams, lakes, reservoir, or conveyance structures, in the exercise of water rights...."

C.R.S. 25-8-503(5). See also C.R.S. 25-8-504(3).

However, this exclusion is not meant to apply to "any point source discharges which generates wastewater effluent...." C.R.S. 25-8-503(b).

(2) Flows or return flows of irrigation water into "state waters" are not to be subject to "any permit ... except as may be required by the federal act or regulations." C.R.S. 25-8-504(1).

(3) Point source discharges into ditches, not excluded under (1) or (2) above, must obtain a permit ("no person shall discharge into a ditch or man-made conveyance for the purpose of evading the requirement to obtain a permit under this article." C.R.S. 25-8-501(1).) Permits regulating discharges into ditches

shall contain such provisions as are necessary for the protection of agricultural, domestic, industrial, and municipal beneficial uses made of the waters of the

ditch or other man-made conveyance structures, which use or uses were decreed and in existence prior to the inception of the discharge. C.R.S. 25-8-503(6).

(4) As already mentioned, if regulation requires a discharger to use a water consumptive treatment technique that would cause material injury to water rights, that injury must be remedied.

(d) Regarding nonpoint source regulation

(1) The commission adopted a policy in 1981 which states, among other things:

use classifications and water quality standards do not themselves constitute control regulations and are not to be applied by any agency of the State of Colorado to non-point source activities unless and until this Commission adopts control regulations specifically to accomplish such result. Use classifications and water quality standards become applicable to non-point sources of pollution through control regulations (25-8-205(1)).

Policy on Water Quality/Water Quantity Issues, January 5, 1981. The policy went on to declare that any such control regulations applied to nonpoint source activities may contravene Colorado water right law. Finally, it stated that the antidegradation provision in the Basic Standard Regulations "cannot expand the jurisdiction of this Commission with respect to non-point sources, and this provision would only become

applicable to non-point sources upon the adoption of control regulations to accomplish such results."

(2) SB10 contained a provision stating that the commission is not to adopt control regulations requiring agricultural nonpoint source discharges "to utilize treatment techniques which require additional consumptive or evaporative use which would cause material injury to water rights." C.R.S. 25-8-205(5).

(3) In this 1988 session the Colorado legislature enacted Senate Bill 119 which provides further guidance to the commission concerning regulation of agricultural nonpoint source discharges. Control of agricultural nonpoint source pollution is to be pursued through "incentive, grant, and cooperative programs in preference to the promulgation of control regulations." Only if such voluntary programs are found by the commission to be inadequate to meet state or federal law shall regulations be enacted.

(4) When "interested" water conservancy, water conservation, and soil conservation districts recommend nonpoint source control activities related to agricultural practices, such recommendations are to be given "substantial weight."

2. Interpretation and Implementation

(a) 1981 Commission policy statement

(1) As just discussed, prior to the enactment of SB10 in 1981, the commission adopted a quality/quantity policy statement. In addition to the provisions concerning nonpoint sources the policy stated that releases from water storage reservoirs are not point source discharges and that diversion of water is not a point source discharge. Policy on Water Quality/Water Quantity Issues, Jan 5, 1981.

(2) The current status of this policy statement is unclear but probably it has been superceded, at least in part, by SB10.

(b) 401 Certification

(1) In compliance with the federal Clean Water Act (Section 401, 33 U.S.C. 1341), the Colorado Water Quality Control Division is authorized to

[r]eview and certify, conditionally certify, or deny requests for certifications Conditions attached to the division's certification shall only implement rules which the commission has made applicable to 401 Certifications. General or nationwide permits under Section 404 of the federal act shall be certified for use in Colorado without the imposition of any additional state conditions. C.R.S. 25-8-302(1)(f)(1987 Supp.).

An applicant for a federal license or permit for any activity which may discharge into waters of the state

must obtain a certification from the division that such discharge will not violate any state water quality requirements.

(2) Questions about the adequacy of commission regulations concerning 401 Certification in the context of the 404 permit for Two Forks project led to a substantial revision which was enacted in February 1988.

(3) Compliance is defined as "not causing significant impairment of a classified use by exceedence of water quality standards, and not violating any applicable effluent limitations or other water quality control requirements." Rule 2.4.3(4).

Approval may be made conditional on adoption of management practices, monitoring requirements, or mitigation requirements. A number of such measures are listed. Of interest here is the provision stating:

Conditions, including monitoring and mitigation requirements, may be imposed to address significant adverse water quality impacts resulting from the activity due to the discharge of pollutants or due to hydrologic modifications; provided, that any conditions imposed shall be consistent with Section 25-8-104 of the Water Quality Control Act. Rule 2.4.5(18).

(4) If compliance cannot be achieved even with the addition of such conditions, then the request for certification must be denied. However,

requests shall not be denied where compliance could be achieved only by conditions inconsistent with Section 25-8-104 of the Water Quality Control Act. In such cases, the division shall identify any such water quality impacts for which mitigation is not being required by the state, due to the state policy established in Section 25-8-104, and recognize that this result is in conformance with state policy. Rule 2.4.7.

(5) Query: Can an activity that results in a violation of state water quality requirements be permitted under the federal Clean Water Act even if the State has not denied the request for certification?

(c) antidegradation

(1) EPA has determined that the states must establish an antidegradation policy as a part of their water quality standards. This requirement was first formally adopted in 1975. It was reviewed and revised in 1983 and essentially provides that (1) existing instream uses and water quality necessary to protect such uses be maintained and protected, (2) where the quality of water currently exceeds that necessary to support propagation of fish, shellfish, and wildlife and recreation such water quality is to be maintained and protected unless, after

a public review process, it is determined that allowing lower water quality (down to that necessary to protect existing uses) is necessary to accommodate important economic or social development, and (3) high quality waters in parks, refuges, and other special areas be maintained and protected. 40 C.F.R. Section 131.12.

(2) The Colorado Water Quality Control Commission is in the process of revising the Colorado antidegradation provisions. The existing standard, adopted in 1979, provides for protection of existing uses but establishes two classes of "high quality waters" and assures no degradation only of the "class 1" waters. To qualify as Class 1 waters, they must represent

an outstanding state and natural resource; no known sources of pollution are present; restrictions on use due to federal status are present; and waters are of recreational and ecological significance.

C.C.R. 1002-8, Rule 3.8.8 (IV).

(3) The Environmental Defense Fund has sued the Region VIII Administrator for EPA, alleging failure to require Colorado to bring its policy into conformance with federal requirements. EDF v. Scherer, Civil Action No. 87-986 (D. Colo).

(4) The proposed revision (as of April 12, 1988) would establish three categories of water for antidegradation purposes: (1) waters classified High Quality Class 1 or 2, (2) waters

classified "Not High Quality", and (3) waters classified aquatic life class 1 and recreation class 1 but not classified with respect to high quality.

Waters will automatically qualify as high quality if (1) threatened or endangered species are present in the water, or (2) the waters are located in a national park, national monument, national wildlife refuge, or designated wilderness area, or (3) the waters are part of a designated wild river under the federal Wild and Scenic Rivers Act, or (4) the existing quality for 12 listed parameters is better than the established "table values" for these parameters.

Waters will automatically be classified as "not high quality" if (1) the use classification, by definition, does not involve water quality "higher than necessary to support primary contact recreation and propagation of fish, shellfish, and wildlife," or (2) the quality for at least 4 of 12 listed parameters is below the table values established for these parameters, or (3) maintenance of quality better than standards requires treatment of discharges beyond requirements of state and federal law. Waters also may be designated not high quality at the discretion of the commission upon a determination that

it is improbable that there will be economically reasonable alternatives available for the potential new development that would maintain existing water quality at least

better than required to protect aquatic life class 1 and recreation class 1 uses

or that the existence of parameters causing pollution other than those listed does not allow the support of aquatic life class 1 and recreation class 1 uses.

Waters classified as cold or warm water aquatic life class 1 and recreation class 1 are presumptively treated as high quality class 2 waters subject to a case-by-case review.

(5) A review procedure is established for "regulated activities with new or increased water quality impacts that may degrade the quality of state surface waters classified (i) high quality class 2, or (ii) aquatic life class 1 and recreation class 1" Regulated activities include those requiring discharge permits and those requiring water quality certification. A procedure for this review process is described which includes, first, a determination by the division of whether the activity is likely to result in significant degradation of protected waters and, if so, then a determination by the commission whether the degradation is necessary to accommodate important economic or social development.

(6) In general, the proposed antidegradation rule appears to meet the minimum federal requirements. However, the federal regulations

state that before degradation of water quality is allowed,

the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

The Colorado provisions state that

[t]he degradation shall be considered necessary if there are no economically reasonable water quality control alternatives available that would result in no degradation or less degradation of the state waters.

Economically reasonable is defined as measures not exceeding 150 percent of the cost of the proposed water quality control measures. Moreover, with respect to nonpoint sources, the Colorado provisions state:

If applicable control regulations have been adopted for nonpoint sources of concern, the determination of necessity also shall take into account whether all cost-effective and reasonable best highly management practices required by such regulations have been achieved.

These provisions do not appear to meet the requirements of the EPA regulation.

(d) Cheraw Lake

(1) In January 1988 the commission adopted a control regulation prohibiting any release of water from Cheraw Lake into Horse Creek as of March 1990 and no releases prior to that time unless the salinity of the water is 5270 parts per million or

less. Any such releases must be monitored to demonstrate compliance. Also by March 1990 no water from water collection systems shall be released into Cheraw.

(2) Apparently there are no water rights to this water. Plans were underway to take some of this water, dilute it with winter flows, and store it in John Martin Reservoir for subsequent releases. The water in Cheraw is highly saline (17,000 mg/l (TDS) in the upper layer and 60,000 mg/l at the bottom), apparently because of highly alkaline native soils in the area, return flows from irrigation, and concentration by evaporation.

Normally, little if any water moved out of the lake but greater than normal water supplies in the Arkansas during the past several years raised concerns that the highly saline water would spill into Horse Creek, damaging downstream users.

(3) The commission specifically determined that the limitation on releases into the lake would have no adverse impacts on water rights.

(4) Query: would the water court have considered evidence on water quality impacts before giving an applicant appropriative rights to Cheraw Lake water?

B. In Relation to Water Rights Allocation

1. A-B Cattle Company v. U.S., 589 P.2d

57(1979)

a. This case originated as a claim for damages by the Bessemer Irrigating Ditch Company against the U.S. for loss of its property right to water containing silt. The Bessemer headgate and the first part of its ditch were innundated by the reservoir created by construction of Pueblo Dam as part of the Bureau of Reclamation's Frying Pan-Arkansas project. Water released from the reservoir to satisfy the Bessemer water right was without the silt content previously contained in the water diverted because the silt settled out in the reservoir. The silt had value to the shareholders of Bessemer because it helped seal the ditches, preventing loss of water in transit and reducing growth of phreatophytes, and caused water to cover more area in irrigation.

b. Legally this involved a substitution of water under C.R.S. 37-80-120 which requires that the

substituted water ... be of a quality and continuity to meet the requirements of use to which the senior appropriation has normally been put.

c. The U.S. Court of Claims asked the Colorado Supreme Court for an interpretation of Colorado law:

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?

d. The Colorado Supreme Court answered no: "In our view the appropriations were for water and not for water containing silt." At 59.

And:

The 'quality' requirement of the statute is not violated where a person slows down the movement of water, resulting in the settling of silt to the bottom and leaving only clear water for the senior appropriator. Further, we regard the storage of water, with consequent settling of silt to the bottom of the reservoir, as not constituting an unreasonable deterioration in quality. At 59-60 (footnote and citation omitted.)

Thus, in evaluating the quality of substituted water, a "reasonable" standard will be applied and loss of silt is not unreasonable.

2. City of Golden Augmentation Plan

a. As part of its application for an augmentation plan, the City of Golden sought to divert up to 20 cubic feet per second out of priority from Clear Creek and replace this water with substitute supplies including its treated sewage effluent. Downstream users including the cities of Thornton and

Westminster objected on a number of grounds including that the sewage effluent would not be of a quality that meets the requirements for which their water has normally been put as required by Colorado law.

b. Golden pointed out that the sewage treatment facility which it shared with Coors was permitted by the Water Quality Control Division. Discharges under the permit meet the effluent limitations which ensure protection of all water quality standards for Clear Creek. This segment of Clear Creek is classified for aquatic, drinking water, agricultural and recreational uses. Porzak, "Innovative Transfer and Exchange Plans," in Tradition, Innovation, and Conflict: Perspectives on Colorado Water Law (L. MacDonnell ed. 1987) 200-203.

c. Nevertheless, the Division One Water Court found that municipal sewage contains carcinogens (cancer-causing agents), mutagens (agents causing genetic damage), and pathogens (disease-causing agents) which are not reliably removed by the secondary wastewater treatment plant used by Golden, and that the discharge of effluent under the proposed augmentation plan will lead to increased cancer and other diseases among those relying on this source for drinking water, to increased disease because of agricultural uses, and to increased algae in Standley Reservoir causing

adverse effects on recreational uses and increasing treatment costs for drinking water. Supplemental Findings of Fact, Conclusions of Law, Judgment and Decree, Water Division No. 1, Case No. 83-CW-361 (June 17, 1986).

d. Thus, in the context of a plan for augmentation involving substituted supplies of water, the water court can make an independent evaluation of whether the replacement water is of adequate quality to meet the requirements for which the water being taken has normally been used. The burden is on the proponent of the plan. Even if the discharge involved meets the effluent limitations established by the water quality control division in a discharge permit, apparently that is not dispositive of the adequacy of its quality. Query: shouldn't the special expertise of the division be given substantial weight regarding such issues?

3. Pueblo Exchange Decree

a. Pueblo sought a decree for an exchange program involving return flows from transmountain imports by which it would be permitted to divert and store native flows of Arkansas River water upstream in exchange for deliveries of transmountain return flows into the Arkansas downstream from its municipal treatment facility and other sources. Here the Division Two Water Court found that the water quality

of these exchanged supplies would meet the requirements of use to which downstream appropriations have normally been put. Findings of Fact, Conclusions of Law, Judgment and Decree, Water Division No. 2, Case No. 84 CW177 (February 24, 1988).

b. However, the court also found that the effect of the exchange would be to decrease stream flows between the points of storage upstream and the points of release downstream below Pueblo, that the decreased flows would cause a decrease in water quality in this reach, especially salinity, that the reduction of flows will cause the "Q7-10" flows (the average seven-consecutive-day low flow expected to occur once in ten years, both annually and for certain seasons) to be recalculated downward thereby causing the treatment standards to be made more stringent because of less dilution to maintain quality standards, that the treatment facilities for the cities of Florence and Canon City which are situated along this section of the Arkansas River have been constructed and upgraded at considerable expense to meet the increasingly strict effluent limitations and that "substantial" additional expense would be incurred if the Q7-10 flow decreased.

Therefore, the court required that the exchange be operated so as to insure the maintenance of a specified minimum stream flow in this reach of the Arkansas

determined as adequate to protect the existing Q7-10 flow.

c. A similar result had been reached by stipulation in a case involving a request for an exchange decree by the City of Colorado Springs. Stipulation with Florence, Canon City, and Pueblo West, Water Division No. 2, Cases No. 84CW202 and 84 CW203 (June 16, 1987).

d. The legal basis for this ruling was not made clear. The statutory provisions relating to exchanges are sparse. Injury to other water rights is the only stated basis for review.

C.R.S. 37-92-305(3). Perhaps this holding can be construed as protecting the water rights of the cities of Florence and Canon City. The policy basis, on the other hand, is more evident: Pueblo should not benefit by such an exchange arrangement at the uncompensated expense of others.

V. Summary and Conclusion

A. Water Use in Colorado Is Constrained by Water Quality Considerations

1. A water right in Colorado does not include the right to injure another's use of water. This general rule explicitly applies to bar water use causing pollution that impairs an entitled use of water.

2. Substituted supplies of water must be of a quality that meets the requirements of use to which the water being replaced has normally been put. Exchanges of water probably are subject to the same requirement.

3. Groundwater use in designated basins may be prevented if it causes unreasonable deterioration in water quality.

4. Beyond these instances, however, there is no clear opportunity for review of water quality issues in water rights decisions. Thus, for example, court review of an application for a new conditional or absolute water right does not include consideration of water quality effects -- either in terms of the general effects on stream quality, in terms of specific effects on the quality-related uses under existing rights, or in terms of effects on other than water-right-related interests. Court review of an application for a change in a water right turns in large part on an evaluation of injury to existing water rights. However, no Colorado case has been found where the question of injury involved quality considerations.

B. Water Quality Regulation in Colorado Is Restricted By Efforts to Protect Water Rights

1. Provisions protecting adverse effects on water rights by those complying with water quality

requirements are entirely appropriate. In this category are the provisions requiring one whose treatment requires increased consumptive use to make up these losses to the stream.

2. Provisions attempting to insulate water use pursuant to the exercise of water rights from the effects of water quality regulation raise a number of issues. On what policy bases are such water uses excluded from the reach of water quality regulation? As discussed, water quality considerations generally are not included in water court review of water rights decisions. Thus there can be no argument of duplication. At the same time, water use in Colorado pursuant to water rights long has been recognized as qualified, subject to a number of restrictions including that such use not harm another's use. Clearly there is no constitutional barrier to the regulation of water use for water quality purposes.

3. The tenuousness of Colorado's position is well illustrated by the Water Quality Control Commission's contortions regarding 401 certification. If the commission finds that an activity seeking a federal permit will cause a significant impairment of a state water quality requirement but that compliance to eliminate this impairment would require some infringement on water rights, apparently it must

approve the certification. Of course, a central question is what kinds of conditions are, in fact, inconsistent with Section 104 of the Colorado Water Quality Control Act. Section 101(g) of the federal Clean Water Act which contains similar language has been interpreted not to prevent "incidental effects" on water rights "prompted by legitimate and necessary water quality considerations." *United States v. Akers*, 785 F. 2d 814, 821 (9th Cir. 1986).

4. Colorado case law notes the "qualified" nature of a water right. The Suffolk case illustrates this view in the context of water quality. The case law relating to changes in water rights is especially rich in its discussion of the legally protectable interest inherent in a water right. From these cases it is evident that it is the priority to the use of water that is the essential, protectable property element of an appropriative water right. See, e.g. *Strickler v. City of Colorado Springs*, 26 P. 313 (Colo. 1891). See also, *Navajo Development Co. v. Sanderson*, 655 P.2d 1374 (Colo. 1982). Although the quantity of water associated with a water right is measured by historical use there is, of course, no guarantee in any given year that this quantity will be available. The water right simply provides a priority to divert this amount of water if it is physically available. Abrogating,

superceding, or impairing a water right in the constitutional sense of "taking" the property interest may well mean an action adversely affecting the priority of the water right.

5. However, Section 104 further restricts the Colorado Water Quality Act from being "construed, enforced, or applied so as to cause or result in material injury to water rights." In Danielson v. Kerbs Ag., Inc., 646 P. 2d 363 (Colo. 1982) the Colorado Supreme Court equated the "material injury" standard under the Colorado Ground Water Management Act with the "injuriously affected" standard for reviewing a change in an appropriative water right and concluded that they both express a policy that the proposed action (a change in a water right) not cause "unreasonable harm" to other appropriators. Thus the analysis should be based on the reasonability of the action. Such an analysis should consider the necessity of the action to achieve legitimate water quality objectives. Thus, the language of Section 104 does not mean that no effects on water rights are permitted, only that the action not result in unreasonable effects on such rights.

C. Colorado Law Should Be Changed to Clarify the Relationship Between Water Use and Water Quality

1. Water courts should be specifically authorized to consider the water quality implications associated with all water rights decisions. Water courts should be able to consider all evidence regarding the water quality effects of a water right decision ~~and~~ including the effects on uses associated with specific water rights, the effects on classified uses of water and the quality standards supporting those uses, and the effects on other interests. The court's evaluation should be based on a standard of reasonability. The Water Quality Control Division should be made a party to such proceedings.

2. Artificial restrictions on the ability of the Water Quality Control Division and the Water Quality Control Commission to implement a reasonable water quality control program should be eliminated and replaced with guidance to these entities to minimize, to the degree feasible, effects on water rights in implementing the Water Quality Act. Subject to this guidance these entities should be permitted to exercise their best professional judgment in seeking to protect Colorado's water quality.