HISTORICAL COMPENDIUM

of

COLORADO WATER LAW

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COLORADO WATER LAW

by

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submitted to
Dr. Robert E. Dils
in fulfillment of the requirements for
Watershed Management 190, Special Problems in
Watershed Management

COOPERATIVE WATERSHED MANAGEMENT UNIT
Colorado State University
Fort Collins, Colorado

December, 1960
ACKNOWLEDGEMENTS

The preparation of this report has necessitated considerable help from persons informed in the field of water law, especially since the act of preparing the paper educated the author in that field.

Mr. William C. Stover, Fort Collins attorney, generously gave of his time, advice, and energy, and provided access to his library. Without his aid this report could never have been accomplished. Mr. Stover further reviewed the manuscript and provided critical help as well. His help is gratefully acknowledged.

Mr. Kenneth Johnson, Clerk of District Court, helped me find my way around the Larimer County Court Library, and answered many questions concerning the nature of references and citations. Dr. James K. Weeks, Assistant Professor, Department of Business, Colorado State University, also provided information on citation methods. The author extends his thanks to these two gentlemen.

Finally, the author extends his thanks to Dr. Robert E. Dils who provided the opportunity in a special problems course in the Cooperative Watershed Management Unit to write this paper, and thus to gain some insight into the problems and nature of water law in Colorado.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgements</td>
<td>ii</td>
</tr>
<tr>
<td>Purpose</td>
<td>1</td>
</tr>
<tr>
<td>Scope</td>
<td>2</td>
</tr>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>Early History</td>
<td>6</td>
</tr>
<tr>
<td>England</td>
<td>7</td>
</tr>
<tr>
<td>The Riparian Doctrine</td>
<td>8</td>
</tr>
<tr>
<td>The Appropriation Doctrine</td>
<td>9</td>
</tr>
<tr>
<td>Classification of Waters</td>
<td>12</td>
</tr>
<tr>
<td>A Note on Citations</td>
<td>13</td>
</tr>
<tr>
<td>Historical Development of Colorado Water Law</td>
<td>15</td>
</tr>
<tr>
<td>Early Developments and the Constitution</td>
<td>16</td>
</tr>
<tr>
<td>The First 55 Years</td>
<td>18</td>
</tr>
<tr>
<td>From 1922 to the Present</td>
<td>52</td>
</tr>
<tr>
<td>In Summary</td>
<td>75</td>
</tr>
<tr>
<td>Implications of the Law on Resources</td>
<td></td>
</tr>
<tr>
<td>Management in Colorado</td>
<td>77</td>
</tr>
<tr>
<td>Appropriation vs. Riparian Doctrine</td>
<td>77</td>
</tr>
<tr>
<td>Timber</td>
<td>80</td>
</tr>
<tr>
<td>Mining</td>
<td>82</td>
</tr>
<tr>
<td>Fish and Wildlife</td>
<td>82</td>
</tr>
<tr>
<td>Range</td>
<td>83</td>
</tr>
<tr>
<td>Irrigable Lands</td>
<td>84</td>
</tr>
<tr>
<td>Water</td>
<td>86</td>
</tr>
<tr>
<td>Conclusions</td>
<td>88</td>
</tr>
<tr>
<td>List of Cases</td>
<td>90</td>
</tr>
<tr>
<td>List of Compacts</td>
<td>94</td>
</tr>
<tr>
<td>Bibliography</td>
<td>95</td>
</tr>
<tr>
<td>Index</td>
<td>96</td>
</tr>
</tbody>
</table>
PURPOSE

It is the purpose of this study to present a logical and unified picture of the development and status of Colorado water law, so as to provide a meaningful interpretation of the field to the land manager.

The individual confronted with managing natural resources, including the water itself as well as resources involving the use of water in making those resources available, is guided and restricted by a multitude of laws of all varieties. These, of course, concern aspects of resource use and development other than water law, but the latter is so extensive and has so many implications in the management of other resources and in the development of the water resource itself, that a survey of this type is justified.

Secondly, for those who have had no introduction to law, it is hoped that this survey will provide sufficient introduction to the law of water rights in Colorado to make their contacts with legal problems more comprehensible.

Finally, it is desired, by the author at least, to understand and to be able to use the large and steadily increasing volume of material on the subject of water law. In the process of meeting the above objectives, it is hoped that this objective is also met.
This paper is divided into three sections. The first is introductory, tracing in a brief fashion the history of water rights from the days of Hammurabi, through the philosophy of the laws in England, to the present water rights situation in the western United States. The relationship between law and the water resource is discussed in the light of this brief history. The two principal doctrines, in use in the United States, riparian and appropriation, are outlined with regard to their main features.

The second section is the survey of the historical development of Colorado water law, prepared from annotated cases, compacts, and important statutes which are concerned with the basic philosophy of the law as applied to watercourses; springs; waste, drainage and sewage waters; and percolating and ground waters. This review covers a period of 95 years, from 1861 to 1956. It excludes the problems of adjudication procedure, the establishment of water rates, and the irrigation district system in the state; these are legal problems dealing with the enforcement of the law and its instrumentation. The material in this section was prepared from a multitude of sources, including in some instances, the original case reports. Since legal language does not easily lend itself to paraphrasing, there are many quotations for which credit is given. There are also, however, a small number of statements not in quotes which are actually the same as those found in the source material indicated:
these were used verbatim because no better way of expressing
the point of law could be found and were not cited because
to cite an additional reference would be burdensome to the
reader. In all instances, the source material is clear from
the text. In certain instances, citations were taken from
Hutchins' treatise (See Bibliography) and cited as if taken
from the case itself.

The third section is a subjective statement on how the
water law in Colorado affects resource use and development with
regard to mining, timber, fish and wildlife, range, irrigable
lands, and water itself. In so doing, the effect of the appropria-
tion doctrine as it has developed in Colorado is compared with
the riparian doctrine as it is generally known.

Finally, the paper has an appendix section which, it is
hoped, will make the paper useful for reference work in the
field of water rights in Colorado.
INTRODUCTION

Law represents a body of principles and regulations within which the actions of individuals and groups in society are governed. The law may be unwritten, in the form of customs or traditions, or written. The written law in the Anglo-American system is of two types: case law and legislation. The former consists of decisions rendered either in courts at various levels, or rendered by administrative bodies of government. Legislation in its broader sense includes constitutions, statutes, regulations of administrative bodies, and local ordinances. 1/

The actions of individuals and groups in society relate to the relationships between man and his environment, and between man and his fellow man. It is one small, but important phase of the former relationship with which we are concerned here.

Proximity to water was the primary factor in the location of early civilizations and, in large part, these civilizations recognized the importance of this resource. With man's increased technological development and his increasing mobility, he has endeavored to manipulate his environment rather than merely tolerate it. In so doing, he has had to expand and maintain the branch of law dealing with his relationship to water.

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Water represents an unusual resource. It is highly mobile, varies in availability from time to time and from place to place, varies in quality, and yet the total amount on the earth's surface is relatively fixed. It represents both a production input and an end-product itself. It may be used in its natural state in its natural channel, or diverted from it; or the energy released by its changes of state may be the goal of use. Its use may be consumptive or non-consumptive, and the laws regulating its use vary with the extent of consumptive use.

The history of American development in relation to watercourses and supplies has led to development of different philosophies underlying the various states' water law. Basically, however, the attitude in the United States is that the water (with the exception of ground water in certain states) is the property of the public, and that the right to the use of water is of the nature of real rather than personal property.2/

There are two basic doctrines underlying man's right to the use of water in the United States; the riparian doctrine, under which the right to use resides in the ownership of riparian lands; and the doctrine of appropriation, under which the right to use is established by diversion from a natural channel and by beneficial use.

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EARLY HISTORY

Hammurabi of Babylonia has provided history with the oldest known set of laws dealing with the water resource. In 1914 B.C. the Code of Hammurabi held that a man whose field had been inundated by the gods so that they provided no grain could not be required to pay his debts that year; that a man whose dikes burst and caused flooding was responsible for his own and his neighbors' damage resulting therefrom; that each community had equal rights to free access to water; and that all who use or depended upon the water resource were responsible for the maintenance and cleaning of the structures which brought that water to the place of use. There are also some allusions in the Code to the rights of individuals to the fish resource. 2/

According to Chambliss:

The Egyptian civilization, like the Babylonian, was made possible by water flowing down from the mountains onto a plain that would have been dry and barren without a ceaseless flow and an annual flood. Both had to build dikes, dams, and irrigation ditches to control the water. 4/

In Egypt too, the rights to the use of the water resource were extensively spelled out in the local laws. These two early civilizations seem to be unique in that they are the only ones which developed in what is today known as an arid climate. These highly developed societies managed to establish

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4/ Ibid., p. 43.
a working system of laws dealing with the natural resources which gave them life, and it has been frequently pointed out that the downfall of these civilizations was due in no small part to the destruction of the water facilities they had constructed.5/

The civilizations which developed and flourished between Egypt and the development of the British Empire have not left us with legal solutions to water problems, with the exception of Rome, upon which much of our present law theory is based. The reason for this would seem to be that these centers of civilization were in more humid areas of the globe, where water was not a limiting factor in growth and development, nor in their survival. Thus the history of water rights jumps for the moment (we shall return to Rome later) to northern Europe, where the growth of civilization even in humid climates began to place pressures on the water resource.

**England**

England, which derived its system of law from the days of the Roman occupation, began to see serious conflicts between water users in the 19th century. Land, having long been the basis for England's nobility and higher classes, was deemed to be the most important factor in the establishment and maintenance of vested rights, and from this concept grew the

riparian doctrine of water rights. The doctrine was apparently formally established in Mason v. Hill in 1833. This doctrine held that the owner of riparian lands, lands which border a natural stream, is entitled to the use of the flow in the stream adjoining those lands undiminished in quantity and quality, and that the right to such use passes with conveyance of the land title. The English court's first application of the doctrine was to surface waters.

Ten years later, in Acton v. Blundell the English court recognized that the water under the surface of the land was the property of the owner of the land, and that if his use of such water drained the well of the stream from which another derived his supply, the latter had no recourse. Ground water, then, was declared to be the absolute property of the landowner.

**The Riparian Doctrine**

Climatic conditions in the American Colonies were similar to those in England, and the riparian doctrine was adopted in the eastern states by the English settlers. Early cases in the eastern states established the principles declared in the two cases cited above, although in certain states ground

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6/ 5 Barn. & Adol. l, 110 Eng. Reprint 692 (1833). However, according to Weil (Waters: American Law and French Authority, Harvard Law Review, 33 (2):147) the doctrine actually succeeded a concept of appropriation of water in England by riparian owners, having been brought to England from France. Whichever the case, it is interesting that it was not until the 19th century that the doctrine was recognized.

7/ 12 H. & W. 324 (1843).
water was not dealt with until much later. In the United States, the riparian doctrine has been modified by the concept of reasonable use, this being left for the court to decide based on the circumstances in each case.

In fact, the doctrine is found in virtually all of the states which either had no public domain lands, or in the states where the public domain lands were disposed of by the government before the inception of the appropriation doctrine in California in 1855.

The Appropriation Doctrine

The appropriation doctrine of water rights had its beginnings in Roman law, and was transported to the United States by the Spanish in the 16th and 17th centuries. This may also have been the source of an appropriation doctrine in England prior to 1843, discussed above. Vestiges of the Spanish appropriation principle which we are confronted with today throughout the western states grew out of the gold mine fields which were the forerunners to advanced development in the western states. The first controversy reaching a state supreme court occurred in California in 1855 and concerned a conflict between a canal owner who had diverted water from public land and a miner who had subsequently located near the stream and diverted water for mining operations. The basis for the decision of the court rested on the fact that the lands in question were,
at the time of diversion at least, public property, not private, and that:

Courts are bound to take notice of the political and social condition of the country, which they judicially rule. ...a system has been permitted to grow up by voluntary action and assent of the population...

The court then continued, saying that while a decision in favor of the defendant would not completely settle the issue for all situations, it considered the question of riparian vs. appropriation doctrine already settled by the people, and thus held in favor of the defendant and stated that as the rights of the two water users were considered equally beneficial, the first in time was the first in right.

Thus began a long series of cases, establishing, modifying, and extending the appropriation doctrine, which appears better-suited to water use on arid lands than the riparian doctrine. This doctrine has spread to almost all the other western states (although it has been modified in California), and may in time and in part, spread to eastern states as water supplies in those states require development to a greater degree than now exists.

One problem in applying the appropriation doctrine as originally conceived, was that it was in violation of the Due Process clause of the Bill of Rights of the United States Constitution. This was not the case in the riparian doctrine,

8/ 5 Calif. 140, 63 Am Dec 113 (1855)
since water shortage was to be borne equally by all water users. On the contrary, under the appropriation doctrine, a person who had diverted water for beneficial use and thus had acquired real property in the form of a decree entitling him to use such water could lose that right merely by being junior to another appropriator in time of short supply. This conflict was met squarely by the courts, in all the western states, by providing for 1) the fact that junior appropriations are made subject to such a stipulation, namely that such appropriators may lose their right to senior appropriators in time of short supply, and 2) compensation to an individual who must cease diversion because statute law has decreed that one use has preference over another, regardless of the time of appropriation.
Classification of Waters

Because of this varied inheritance which has applied different philosophies to the rights to the use of the water resource in the United States, the courts have recognized a classification of natural waters. The classification, adopted from Hutchins, is as follows:

A. Waters on the surface of the earth
   1. Diffused surface waters.
   2. Surface waters in watercourses:
      a. waters flowing in well-defined channels,
      b. waters flowing through lakes, ponds, or marshes, which constitute integral parts of a stream system.
   3. Surface waters in lakes or ponds where evidence fails to indicate connection with a stream system.
   4. Spring waters.
   5. Waste waters.

B. Waters under the surface of the earth
   1. Ground waters:
      a. waters flowing in defined subterranean channels, and
      b. diffused percolating waters.

With increasing hydrologic knowledge, and increasing use of the water resource, this classification has presented as well as solved certain problems. As we shall see, only limited recognition of these classes of waters has occurred in the Colorado courts, since they have not distinguished between them.

The terms, however, are frequently used to describe the waters in question.

**A Note on Citations**

The majority of legal citations concerning points of law about the water resource are of judicial, or court origin. The citation, unfamiliar to those who have not done research in law, is often as follows: 46 Jour For 589 (a fictitious reference). This would mean Journal of Forestry, volume 46, page 589. The lawyer places the volume number first, even if there is only one volume; an abbreviation of the work's title, or court report, or author's last name and title of the work; the page; and the date.

Court cases may be decided at any of several levels and, if appealed, at several levels. The last appeal of the case, not the entire history unless pertinent, is the one cited, and the year shown in the citation is the year of that decision. All names are cited as they appear at the beginning of the official report of the case. Abbreviations may not be found in most dictionaries, and are rigidly adhered to in case citations. The principles behind abbreviation are uniformity, brevity, and lack of ambiguity.

Most cases will take the form, for example: 55 Golo 244, 133 Pac 1107 (1913). This means that this case will be found reported in volume 55 of *Colorado Reports*, page 244; and also in volume 133 of *Pacific Reporter*, page 1107. The case was decided in 1913. This gives, therefore, two references in
which to find the case, the former covering all Colorado Supreme Court cases, and the latter covering supreme court cases of a large number of states, thus providing the owner with a greater legal history from which to draw while doing research work or in preparing a brief.

The abbreviations of reports used in this paper are as follows:

- **Cal, Calif** California Reporter
- **C.C.A.9th** 9th Circuit Court of Appeals Reports
- **Colo** Colorado Reports
- **Colo App** Colorado Court of Appeals Reports (1891-1915)
- **Fed** Federal Reporter (1880-1924)
- **F2d** Federal Reporter, Second Series (1924-date)
- **Pac** Pacific Reporter (1883-1931)
- **P2d** Pacific Reporter, Second Series (1931-date)
- **U.S., US** United States Supreme Court Reports (1754-date)
The first application of the appropriation doctrine in the United States occurred in California, in Irwin v. Phillips, where the court held in a conflict between a miner and a canal owner that the riparian doctrine should not be applied because the lands were not owned individually, but were the property of the United States, and that:

Courts are bound to take notice of the political and social condition of the country. ... a system has been permitted to grow up by the voluntary action and assent of the population.... If there are, as must be admitted, many things connected with this system which are crude and undigested, and subject to fluctuation and dispute, there are still some which a universal sense of necessity and propriety have so firmly fixed as that they have come to be looked upon as having the force and effect of res judicata.

Certainly, the California court was right: there were many things about the concept that were "crude and undigested," but the success of the appropriation doctrine has testified to its equality and flexibility.

Actually, the concept of appropriation had been known throughout the western states long before Irwin v. Phillips. The Spanish and the Mormons, for example, are known to have diverted water from its natural channel in order to make use of it for irrigation purposes. We are here concerned, however, with the development of this doctrine before the courts and in the statutes and compacts as they pertain to the establishment of vested rights in and the application of the water resource to beneficial use in Colorado.

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5 Cal 140, 63 AM Dec 113 (1855)
Early Developments and the State Constitution

An early act of the Colorado Territorial Legislature recognized the riparian right of water use along a stream for agricultural purposes. This act, however, has been clearly overridden by a multitude of statutes and case decisions, the first case being that of Yunker v. Nichols in 1872. Besides giving preference to the appropriation doctrine, the court further established the principle of obtaining an easement to convey water across another's land in order to bring the water to a place of beneficial use. Prior to this case, custom among the mine fields and among the early irrigators was to divert such water from the stream, and that the first to do so was the first in right, although until 1872 there was no court protection granted to diversion rights-of-way.

An important statute, also in 1872, granted "That all ditches used for the purpose of irrigation, and that only where the water is not sold for the purpose of deriving revenue therefrom, be and the same are hereby declared free from all taxation, whether for state, county, or municipal purposes." This statute may have given the Territory a much needed shot-in-the-arm for it doubtless encouraged non-taxable improvements on the land and furthered the development of agricultural practices. Whether or not it was repealed is irrelevant here: it was an important move at the time.

11/ 6 Colorado Revised Statutes(1953) 431, art. 2, 147-2-1.  
12/ 1 Colo 551(1872).  
13/ 1 General Laws of Colorado 517, c. L. 1384, s. 1(1877).
The next major development in Colorado water law was the adoption of the State Constitution in 1876. Sections 5 through 8 of Article XVI dealt with the water resource as public property, its appropriation, rights-of-way, and rates, respectively, and they are reproduced here in their entirety, minus case citations which are taken up as they occurred chronologically.

"IRRIGATION"

Section 5. Water of streams, public property.—The water of every natural stream, not heretofore appropriated, within the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided.

Section 6. Diverting unappropriated water—priority of uses.—The right to divert unappropriated waters of any natural stream to beneficial uses shall never be denied. Priority of appropriation shall give the better right as between those using the water for the same purpose; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall have the preference over those claiming for any other purpose, and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes.

Section 7. Right of way for ditches, flumes.—All persons and corporations shall have the right of way across public, private, and corporate lands for the construction of ditches, canals and flumes for the purpose of conveying water for domestic purposes, for the irrigation of agricultural lands, and for mining and manufacturing purposes, and for drainage, upon payment of just compensation.

Section 8. County commissioners to fix rates for water, when.—The general assembly shall provide by law that the board of county commissioners in their respective counties, shall have the power, when application is made to them by either party interested, to establish reasonable maximum rates to be charged for the use of water, whether furnished by individuals or corporations.14

14/ Colorado Constitution, art XVI, secs. 5-8.
The First 55 Years

In 1877, a law was passed by the Legislature regarding the state's fish resources.\footnote{1 General Laws of Colorado 465, c. 37, 1218, s. 3(1877).} It repealed earlier acts of 1870, 1872 and 1874, stating that:

Any person or persons, or the officers and servants of any company or corporation, maintaining or keeping up any dam, weir, or other artificial obstruction, in or upon any stream of water in this state, shall erect and keep up, and maintain at such dam, weir, or other artificial obstruction, a sufficient sluice or fishway for free passage of fish up and down any such stream.

This statute is obviously an important one, particularly with regard to preservation of recreational values in the state, and the author has found no case decision or subsequent statute which overrides it.

Another important law, the Desert Land Act,\footnote{19 Stat 377, c. 107, s. 1, March 3, 1877.} was passed by Congress in 1877, although Colorado was not included originally. The Act provided for the sale of desert lands by sections to persons "undertaking and effecting their reclamation."

The Act contained a proviso stating that:

The right to the use of water by the person so conducting the same, on or to any tract of desert land of six hundred and forty acres shall depend upon bona fide prior appropriation: and such right shall not exceed the amount of water actually appropriated, and necessarily used for the purpose of irrigation and reclamation: and all surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers, and non navigable, shall remain and be held free for the appropriation and use of the public for irrigation, mining, and manufacturing purposes subject to existing rights.
A more complete study and analysis of the role of this Act and preceding acts of 1866 and 1870 may be found in an Interior Department publication. These acts apparently played an important role in the Supreme Court's decision in the Laramie River litigation (discussed later) in Wyoming v. Colorado in 1922, and thus in large part paved the way for settlement of interstate conflicts over water rights, and for interstate compacts.

1878 saw another celebrated case, Schilling v. Rominger, which again gave the appropriation doctrine preference over the riparian doctrine in the state.

A statute passed in 1881 provided for adjudications of all water rights in the state after 1) appropriation, and 2) application to beneficial use; and for the establishment of statutory water districts within which such adjudication and administration might take place. There were established 70 water districts, administered by water commissioners, and 7 irrigation divisions, each under an irrigation division engineer. The whole organization was to be under the State Engineer. The law provided, too, for filing of claims not yet completed or put to beneficial use before January 1, 1922, under penalty of cancellation.

18/ 4 Colo 100 (1878).
19/ Colorado Compiled Laws, 1921, secs. 1792-95; Colorado Statutes Annotated, 1935, c. 90, secs. 190-193.
Yunker v. Nicols and Schilling v. Rominger (above) prepared the way for what is generally considered as the most important case in Colorado concerning the Colorado Doctrine: in Coffin v. Left Hand Ditch Co. the court observed that the appropriation doctrine had been recognized and adhered to by water users since the earliest appropriations of water in the state, and that:

We conclude, then, that the common law doctrine giving the riparian owner a right to the flow of water in its natural channel upon and over his lands, even though he makes no beneficial use thereof, is inapplicable to Colorado. Imperative necessity, unknown to the countries which gave it birth, compels the recognition of another doctrine in conflict therewith.

It is interesting to note here, that the only provision in the State Constitution which provides compensation for condemnation of a vested right concerns rights-of-way (section 7). It remains for a later decision to resolve the conflict between the appropriation doctrine and the United States Constitution's Due Process clause.

The rule that to constitute a valid appropriation of water there must be an actual diversion of the water from the natural source of supply was not affirmed until later in the State's history. In early cases, such as Thomas v. Guiraud, it had been stated that the appropriation consisted of application to beneficial use, and that the methods involved, including the actual diversion, were immaterial.

20/ 6 Colo 443 (1882).
21/ 6 Colo 530 (1883).
The constitutionality of the provision in Section 7 of the state Constitution was tested in *Tripp v. Overocker*\(^{22/}\) in 1883, and was upheld by the court.

Two important points were brought before the courts in 1884, in *Sieber v. Frank*\(^{23/}\). The first was that if initiation of appropriation is followed by diligent construction of diversion facilities, the appropriation, upon application to beneficial use, dates from the initiation of such appropriation. The result of this decision is still valid. The second point concerned abandonment: in this instance, it was noted that proof is necessary to preclude a presumption of intent to abandon. In actual fact, it would appear from subsequent decisions that the burden of proof of abandonment is on the person seeking to establish abandonment, and this is an extremely difficult point to prove, since it involves the question of one's intent. Abandonment is still one of the points of law frequently dealt with in water rights litigation.

In *Knoth v. Barclay*\(^{24/}\) the court held that the occupant of land to which he had made no effort to obtain title, i.e., from the United States, had no right to collect compensation for a right-of-way across his land, as provided for in Section 7 of the Constitution.

Two types of canal companies have been recognized by the courts: mutual and carrier. The former is owned by the

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\(^{22/}\) 7 Colo 72, 1 Pac 695(1883).
\(^{23/}\) 7 Colo 148, 2 Pac 901(1884).
\(^{24/}\) 8 Colo 300, 6 Pac 924(1885).
water appropriators, each holding share in the non-profit company to the extent of their respective appropriation of water. The carrier company, on the other hand, is a profit-making corporation, entitled to charge compensation for the carriage of water, but not to charge a fee for the use of the water which is the property of the public.25/

In 1888 another important case26/ was argued before the state supreme court concerning the relative rights of riparian land owners who obtained their land from the federal government prior to the original and amended mineral lands acts. The court stated that:

One who has made an appropriation of the waters of a stream for irrigation acquires a prior right there-to, as against a riparian owner who obtained a patent (land) from the United States after such appropriation, and before the act of Congress of July 9, 1870, ammending act of Congress of July 26, 1866, provided that patents thereafter issued shall be subject to any vested or acquired water-rights.

This decision, then, validated the use of water from natural streams on non-riparian lands, and also provided that prior rights maintained their priority dates upon sale or transfer.

In Downing v. More,27/ the court held that the "statutory authorization for one to enlarge and use the ditch of another does not apply to a ditch constructed by the owner of the land to water his own land exclusively," thus avoiding many potential ditch rights infringements, and perhaps encouraging development of mutual ditch company organization.


26/ Hammond v. Rose, 11 Colo 524, 19 Pac 466, 7 Am St Rep 258(1888).

27/ 12 Colo 316, 20 Pac 766(1888).
With the increasing establishment of ditch companies, conflicts over relative rights of appropriations carried in the same ditch were inevitable. In *Farmers High Line Canal & Reg. Co. v. Southworth*, as stated in the Colorado Revised Statutes,

Consumers taking water from the same carrier within a reasonable time after the carrier's diversion have the same constitutional priority dating from such diversion; and as to such consumers, the prorating statute is constitutional.

An attempt in 1889 was made to distinguish between various classes of water by a statute which provided that springs on an owner's land may be appropriated with prior right by him for use on those lands. This later was overruled in *Bruening v. Dorr* in 1896.

In 1891, fully fifteen years after the adoption of the Constitution, the supreme court held in *Armstrong v. Larimer Co. Ditch Co.* that the provision of sections 5 and 6 of article XVI are not retroactive and do not authorize interference with appropriative rights established and maintained by those sections. The use of the word "appropriative" precluded any vested riparian rights established in the act of 1861.

Another important case came before the court in 1891. In *Strickler v. Colorado Springs*, four particularly significant points of law were decided. First, with reference to

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28/ 13 Colo 111, 21, Pac 1028(1889)
29/ Colorado Constitution, art. XVI, s. 5.
30/ 6 Colorado Revised Statutes 433, 147-2-2, (1953).
31/ 1 Colo App 49, 27 Pac 235(1891).
32/ 16 Colo 61, 26 Pac 313(1891).
section 6 of the Constitution, the role of preferred uses was clarified: "the only practical effect of preference is to give a preferred use the right to condemn a subordinate use," and was not to be construed as giving a junior right priority over a senior right based on preference as outlined in that section. Second, from the Colorado Revised Statutes, "A priority to the use of water for irrigation is a property right and may be transferred to a city for municipal use, independant of the transfer of the land." Third, the decision sanctioned a change in the place and character of use if vested rights on that stream are not thereby injured. And, finally, the decision spoke of the role of tributary waters. This point has had a long series of appearances before the court: this is one of the earliest, and the court's interpretation was well re-stated by Hutchins:

The principle is well established that water flowing in the tributary streams, above the point of diversion on the stream on which the right is acquired, is as much a part of the appropriator's supply as is the water flowing in the main stream named in the appropriation; accordingly, an attempted diversion of water from an upstream tributary, at a time when needed by prior appropriators below on the main stream will be enjoined. The question arose from this case as to where the tributary waters ended: whether with a spring, seep, or with ground waters which supplied that tributary and were themselves tributary. This point has come up time and again and is discussed as it arose in the various cases below.

33/ Colorado Constitution, art. XVI, s. 5
34/ op. cit., p. 21.
Four important cases came before the court in 1892. The first resulted in a decision stating that a ditch company cannot under constitutional provisions obtain a priority without "an actual and bona fide user." This obviously prevented water speculation and monopolization of supply.

The second case provided that while an appropriator cannot identify his water in a ditch, he cannot complain if he gets his full share, even if the appropriation is for the entire flow of the stream. The second point, apparently the first time it appeared before the supreme court, was that the prior right can be protected in court by suit brought and maintained against all junior appropriators.

In the Morgan Land & Canal Co. v. South Platte Ditch Co. the court held 1) that the water of every stream in the state is the property of the public, as established in section 5 of the Constitution; 2) that the appropriation for irrigation constitutes both diversion and use; and 3) that beneficial use has taken place only when the water is actually applied to the soil.

The fourth case in 1892, Wyatt v. Larimer & Weld Co. Irr. Co. limited the application of the decision in F. H. L. O. & R. Co. v. Southworth (1889); was appealed to the Circuit Court of Appeals, and was subsequently reversed.

35/ Combs v. Agricultural Ditch Co., 17 Colo 146, 28 Pac 966 (1892)

36/ Saint v. Guerrero, 17 Colo 448, 30 Pac 335, 31 Am St Rep 320 (1892).

37/ 18 Colo 1, 30 Pac 1032, 36 Am St Rep 259 (1892).

38/ 1 Colo App 480, 29 Pac 906 (1892).
The court's decision in the appeal is here summed up by quoting from the Colorado Revised Statutes:

A canal company carrier is not the proprietor of the water diverted by it but an intermediary agency existing for the purpose of aiding consumers in the exercise of their rights to water. Contracts by the company to dispose of water in excess of its ability to furnish without encroaching on the rights of prior appropriators are illegal.

Up until this time, appropriation had been primarily for mining or agricultural purposes, but in 1893, in Lamborn v. Bell the court held that "a right of way for a ditch to convey water to operate an electric light plant is a use for manufacturing purposes within the meaning of this section (7) and may be condemned." This decision clearly established the production of power from hydro-electric plants as a beneficial use under the terms of the Constitution.

McClellan v. Hurd was an important case, not so much from the standpoint of the original issue, but from the standpoint of a statement made by the court establishing a rule which has had significant ramifications in later cases:

It is probably safe to say that it is a matter of no moment whether water reaches a certain point by percolation through the soil, by a subterranean channel, or by an obvious surface channel. If by any of these natural methods it reaches the point, and is there appropriated in accordance with the law, the appropriator has a property in it which cannot be

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40/ Colorado Constitution, art. XVI, s. 6.
41/ 18 Colo 346, 32 Pac 989 (1893).
42/ 3 Colo App 430, 33 Pac 280 (1893).
divested by the wrongful diversion by another, nor can there be any substantial diminution. To hold otherwise would be to concede to superior owners of land the right to all sources of supply that go to create a stream regardless of the rights of those who previously acquired the right to use of the water from the stream below.

Thus, the question of tributary waters was carried to the stage of percolation or subterranean channels, and these classifications were embraced in the appropriation doctrine in the state of Colorado. The day when a head-on collision between surface and sub-surface water rights was to occur was brought closer by the inevitable decision in this relatively obscure case.

The next step in this process of carrying the appropriation doctrine via the tributaries to the source of supply came before the court in the following year. The court held in Denver, Texas & Fort Worth R. R. v. Dotson43/ that with regard to riddance of waters not in a running stream as related to a right-of-way, those waters could be appropriated, and that such appropriation was valid under the statute relating to waste, seepage, and spring waters.

1895 saw two points of law decided in two separate cases, both of which apparently constitute the respective points' first appearance before the court. The first, Arnett v. Linhart44/ held that a water right may be sold apart from the land upon which it was used, and the second45/ that mere lapse of time

43/ 20 Colo 304, 38 Pac 322(1894).
44/ 21 Colo 188, 40 Pac 355(1895).
45/ Beaver Brook Res. & Canal Co. v. St. Vrain Res. and Fish Co. 6 Colo App 130, 40 Pac 1066(1895).
does not constitute "proof" as specified in Sieber v. Frank (1884).

Partially upholding Thomas v. Guirard (1883), the decision in Farmers’ Independent Ditch Co. v. Agricultural Ditch Co. held that diversion alone does not constitute the appropriation — there must be beneficial use as well. It further stated, as before, that tributary waters cannot be appropriated if such appropriation injures prior appropriators on that stream. The court also held that "ditch companies are quasi-public carriers, --a means to an end to be resorted to for the purpose of conveying water from natural streams to places where it may be applied to beneficial uses;" and that different appropriators may have different priorities, even though the waters are mingled in the same ditch.

Tributary waters came before the court again in 1896, in Bruening v. Dorr where, according to Hutchins, the opinion in Bruening v. Dorr referred to "the well recognized doctrine that percolating water, existing in the earth, belongs to the soil, as a part of the realty, and may be used and controlled to the same extent by the owner of the land," but held that the water of a spring which was one of the sources of supply of a stream could not be diverted to the prejudice of prior appropriators from that stream.

Thus, springs which were direct tributaries to approvable streams were added to the growing list of approvable waters.

46/ 22 Colo 513, 45 Pac 444, 55 AM St Rep(1896).
47/ 23 Colo 195, 47 Pac 290(1896).
48/ op. cit., p. 209.
The court clarified the Constitution's preference listing as far as domestic water supplies were concerned in *Montrose Canal Co. v. Loutsenhizer Ditch Co.* by stipulating that such domestic use was intended to include only that of a riparian owner taking water for himself and his family or his stock, and did not include large ditches diverting water to municipalities. This case was overruled in *Sterling v. Pawnee Ditch Extension Co.* in 1908. In both of these cases, the water may be taken without compensation, apparently the practical meaning of "preference" as used in section 6 of the Constitution.

In 1897, the court upheld the constitutionality of the prorating statute, stating in *Larimer & Weld Irr. Co. v. Wyatt* that in time of scarcity of water, the statute could compel prorating of existing supplies among priorities of equal or nearly equal date.

The preferred domestic use discussed above in *Montrose Canal Co. v. Loutsenhizer Ditch Co.* was dealt with again by the court in 1896: in the *Broadmor Dairy & Live Stock Co. v. Brookside Water & Impr. Co.* the court held that such domestic use on riparian lands goes with the land, and "cannot be conveyed apart from it."

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49/ 23 Colo 233, 48 Pac 532(1896).
50/ 23 Colo 480, 48 Pac 528(1897).
51/ 24 Colo 541, 52 Pac 792(1897).
A new slant regarding tributary waters came before the court in 1898 in *Platte Valley Irr. Co. v. Bruckers Irr. Mill. & Impro. Co.*<sup>52/</sup> The court held that if the waters of natural stream disappear into the stream bed before reaching the main stream, the prospective divertor of those waters has the burden of establishing that such waters do not in fact reach the main stream. This appears to be a special case of percolating waters, and one obviously to be litigated before percolating waters outside of natural channels. In the same case, the court held that a person draining lands adjacent to a lake, was entitled to any flow over and above the normal flow released from the lake. Both of these points laid a foundation for later decisions: the first comes up again in cases involving the rights to percolating waters, and the second involving rights to "made" waters.

In *Water Supply & Storage Co. v. Larimer & Weld Rea. Co.*<sup>53/</sup> the court held that return flow is subject to appropriation as provided for in the Constitution if without being artificially intercepted (appropriated) those waters would return to a natural watercourse. This decision also had far-reaching ramifications, for it seems to have established that if the waters of return flow did not reach a natural stream, they could be captured and used outside of the framework of the appropriation doctrine. This decision led, therefore, to outright ownership of non-tributary waters.

<sup>52/</sup> 25 Colo 77, 53 Pac 334(1898).
<sup>53/</sup> 25 Colo 87, 53 Pac 386(1898).
The rights of share-holders in mutual ditch companies came before the court in *Cache la Poudre Irr. Co. v. Larimer & Weld Reg. Co.*, also in 1898. The court held that a change in transfer of stock in a mutual ditch company was also a change in interest in the company and a change in priority; that a water right may be sold separate from the land if there is no injury to prior appropriators; and that abandonment could not be shown if one of the ditch decrees is increased by an appropriator but used by another when the flow in the ditch is not greater than the total decrees, for use is maintained.

In *Colo. Mill. & Elev. Co. v. Larimer & Weld Irr. Co.* the court held that character of use had no influence on water rights acquired prior to the adoption of the Constitution, and are not affected by that statute's priority provisions. In the 1953 Colorado Revised Statutes this case is annotated under section 6, indicating that the court felt that further clarification of *Armstrong v. Larimer Co. Ditch Co.* (1891) was in order concerning preference listing in that section of the Constitution.

*Lamson v. Vailes* in 1900 brought up a very controversial subject, and one which eventually led to interstate compacts and litigation concerning its main point, which involved the diversion of water from within the state for

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54/ 25 Colo 144, 53 Pac 318(1898).
55/ 26 Colo 47, 56 Pac 185(1899).
56/ 27 Colo 201, 61 Pac 231(1900).
beneficial use outside the state boundaries. The conclusion reached by the court is somewhat confusing, but generally the court held that it was not the intention of the Constitution to appropriate waters of natural streams in this manner. This was based on the fact that the original Territorial legislation covered irrigation in the Territory only, and thus any outgrowth of this legislation could not sanction irrigation use outside the Territory, even if the water were diverted within the state. This matter was clarified in *Weiland v. Pioneer Irr. Co.* in 1922, in what would appear to be a reversal of this decision.

Another important decision was rendered in 1900 in *Lower Latham Ditch Co. v. Louden Irr. Canal Co.*\(^{57}\) In it the court stated that a senior appropriator must establish that water released from a junior right upstream would in fact reach his diversion facility before the court will cause the junior appropriator to forego his right.

According to Mr. J. R. Barclay, Secretary-Manager of the Northern Colorado Water Conservancy District,\(^{58}\) by 1900 almost the entire irrigation reservoir and ditch systems in eastern Colorado were established as they are today. As is evident from court records, many of the decisions centered around conflicts between individuals and ditch companies.

\(^{57}\) 27 Colo 267, 60 Pac 629, 83 Am St Rep 80(1900).

\(^{58}\) From notes taken by the author in a seminar presentation from Mr. Barclay at Colorado State University, October 17, 1960.
Obviously, too, rights in time of shortage of supply were coming before the court with increasing frequency. One of the peculiarities of diversion for the purpose of irrigation was brought out in New Loveland & G. Irrig. & Land Co. v. Consolidated Home Supply Ditch & Reservoir Co. The court held in this case that appropriation of water for irrigation was allowed during the irrigation season only, unless 1) there was, along with the original appropriation, an expressed intent to construct reservoir facilities; 2) the reservoir (to be filled during the non-irrigating season) was an established part of the diversion system; or 3) the priority of the storage rights became the date of start of construction of such reservoir, in which case a single appropriation would consist of storage and direct-flow rights of different priorities.

Another decision in 1900 stated that water rights may be made appurtenant to the land by contract between the irrigation company and its stockholders or consumers. It would appear that this decision was protection for the irrigation company, which otherwise could suffer sale of water rights and land separately.

In Chippen v. White the court held, according to the 1953 Colorado Revised Statutes, that:

Since appropriators are not owners in common with the public or with each other of waters in a stream but merely entitled to priorities of diversion, they cannot maintain an action for partition of same.

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27 Colo 525, 62 Pac 366, 52 LRA 266(1900).
60/ Wright v. Platte Valley Irr. Co., 27 Colo 322, 61 Pac 603(1900).
61/ 28 Colo 298, 64 Pac 184(1901).
62/ Colorado Constitution, art. XVI, s. 5.
Return flow rights came before the court again in 1902 in *Mabee v. Platte Land Co.*63/ The court held that appropriation of waste water, on return flow, from another appropriation has the right in time only, not in quantity, and the user from which the return flow emanates is under no obligation to supply a given amount, or any at all.

The tributary question arose again in 1902 in a somewhat disguised form in the *Medano Ditch Co.* case.64/ The court was asked to distinguish between percolating and ground waters, but held that percolating waters were not involved in this case, and that:

Underground currents of water which flow in well-defined and known channels, the course of which can be distinctly traced, are governed by the same rules of law as streams flowing upon the surface. The channels and existence of such streams, though not visible, are "defined" and "known" within the meaning of the law when their course and flow are determinable by reasonable inference.

The decision, then, included such described ground waters in the general framework of the appropriation doctrine in Colorado, and thus added one more class of natural waters to the growing number of classes dealt with under the doctrine.

On June 17, 1902, the National Reclamation Act65/ was made law, providing for large-scale reclamation and development of arid areas in the western states. The Act maintained, in its eighth section that:

63/ 17 Colo App 476, 68 Pac 1058(1902).
Nothing in this act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State of Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State of the Federal Government or any landowner, appropriator, or user of water in, to or from any interstate stream of the waters thereof: Provided, that the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and limit of the right.

According to Witmer, the reason for the inclusion of interstate streams was due to the pendency at the time of the passage of the Act of Kansas v. Colorado, which case was not finally decided by the Supreme Court until 1907.

The Reclamation Act has led to considerable irrigation development in Colorado, notably the Colorado-Big Thompson Project, which carries water from the headwaters of the Colorado River on the western slope of the continental divide to the irrigable areas of the South Platte valley. In accomplishing this mammoth project, much litigation has arisen: these are taken up as they occurred chronologically in the following pages.

An interesting point came before the court in 1904 in Buckers Irr. Mill. & Impr. Co. v. Farmers' Independent Ditch Co. The court determined that the flow of water in ditches next to natural watercourses which obtain flow from those

66/ op. cit., p. 598.
67/ 31 Colo 62, 72 Pac 49(1903).
courses is considered part of the natural stream, and appropriators are thus protected in their rights of diversion and use. It is clear that if the court held otherwise, the water in such ditches would be outside the jurisdiction of the appropriation doctrine, and thus would be subject to ownership and capture.

Gradually, the role of the federal government in exercising control over the water resource came before the courts. The Colorado Supreme Court held in the relatively early case of Mohl v. Lamar Canal Co. that state as well as federal statutes are only in recognition of and do not create the rights to diversion and use of the water resource for beneficial purposes, and that the appropriator can obtain his appropriation only by conforming to the laws regulating its use.

Based on the decision rendered in McClellan v. Hurdle in 1893, the court held, in Oglivy Irr. & Land Co. v. Insigner that rights to ground waters may also include waste, seepage, drainage waters, and sewage. Since ground waters had previously been held to be tributary, these newly-added classes were also tributary, and thus subject to appropriation as well.

The southwestern Colorado city of Telluride was plaintiff in two suits in 1905. In the first, the court held that the appropriation was "available whenever, by reason of flow, there is sufficient water for such beneficial use." Thus, there can be no interference with the rights of others if there is no beneficial use, or insufficient water for beneficial use.

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70/ Telluride v. Blair, 33 Colo 353, 80 Pac 1053(1905).
In the second case, Telluride v. Davis,\textsuperscript{71} is presented what is perhaps a typical history of water rights litigation. Davis and a Mr. Brown shared a ditch with separate places of use and separate priorities. Brown sold his right to Telluride, and the latter sought to change the point of diversion to better suit its requirements. Davis sued to prevent the change, and this was upheld by the lower court. Telluride appealed the decision to the supreme court and won a reversal, permitting the change in point of diversion because injury to Davis was not shown.

In \textit{Fort Lyon Canal Co. v. Chew}\textsuperscript{72} in 1905, the court held that a junior appropriator is entitled to protection against injury by increase in a senior appropriator's diversion. The latter must make provision for any increased appropriation to be returned to the stream for any juniors. This case upheld the earlier statute\textsuperscript{73} which provides for exchange of appropriated waters between users to save crops or to make more economical use of water, but the case cited held also that 1) there must be no injury to other appropriators, and 2) there can be no lending at time of shortage when water is needed by an appropriator who is junior to the lender and senior to the borrower.

\textsuperscript{71} 33 Colo 355, 80 Pac 1051, 108 Am St Rep 101(1905).
\textsuperscript{72} 33 Colo 392(1905).
\textsuperscript{73} Colo Stats Ann, 1935, c. 90. S. 110.
Two points of law were decided by the court in Clark v. Ashley in 1905. The first concerned the statute relating to the use of spring waters which was held to be "not applicable to a spring which is part of the supply of a stream the water of which was appropriated before its enactment." In this case, a landowner claimed the water of springs arising on his land, which flowed in a well-defined channel to a creek on which appropriative rights had been secured by others. The court held that:

There was testimony that the volume of the springs had been increased by seepage from irrigated lands above them. This, if true, would not entitle the defendants to divert the spring waters. The spring is one of the sources of the creek and it makes no difference, it seems to us, that the volume had been increased by the irrigation of land above.

In other words, springs were maintained in the appropriation system, even when arising on private land or if increased by return flow (see Water Supply & Storage Co. v. Larimer & Weld Co. Res. Co., 1898).

Again, in 1905, the court refused to decide on the ownership of percolating waters. California had already declared on this point, and the case in Colorado resulted, in part, in this statement from the decision:

The law regulating ownership of percolating waters in the arid states is now of great, as time passes will be of still greater, importance, and until a proper case is presented calling for it we decline to announce the rule applicable to our local conditions.

74/ 34 Colo 285, 82 Pac 588(1905).
75/ Colo Comp Laws, 1921, secs. 1637 and 1638; Colo Stats Ann., 1935, c. 90, secs. 20 & 21.
76/ Smith Canal or Ditch Co. v. Colorado Ice & Storage Co., 34 Colo 485, 82 Pac 940(1905).
The case, incidentally, was primarily concerned with rights-of-way for ditches: the court held that the second right-of-way should be allowed if it did not interfere with the plaintiff's superior right.

The Desert Land Act of 1877 was cause for litigation in the Colorado courts for another point in 1905. This statute made, in effect, all non-navigable waters on the public domain subject to appropriation according to state or territorial laws. The court, in *La Jara Creamery & Live Stock Assn. v. Hansen*\(^77\)/ held that if valid at all, the statute referred only to waste, seepage, and spring waters before they reached a well-defined channel. The decision here is a bit perplexing in view of concurrent decisions concerning the same point, and bears further study into the circumstances.

In *Anderson v. Grand Valley Irr. Dist.*\(^78\) the court held that the irrigation district statute "was not unconstitutional as a grant of water rights for public use instead of an appropriation since water rights appropriated were private property for the use of individual landowners in the district," and were not held by the District.

In *Burkhart v. Heiberger*\(^79\) the court held that an appropriator may be enjoined from giving away, wasting, or otherwise disposing of water without beneficial use over and above the amount required for beneficial use, but less than his

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\(^77\) 35 Colo 105, 83 Pac 644(1905).
\(^78\) 35 Colo 525, 85 Pac 313(1906).
\(^79\) 37 Colo 187, 86 Pac 98(1906).
appropriation if it injures junior appropriators (nothing said about senior appropriators). The court also finally drew the line between appropriation and outright ownership and capture. The dividing line specified that water which had fallen on the land and had not collected into a well-defined channel was subject to capture and use by the individual on whose land that water falls. The class of water, then, was in fact diffused surface waters and, by this decision, they were clearly established as being outside the appropriation doctrine in Colorado.

With increasing diversions, and supplementing of natural flows by trans-basin diversions, the problem of maintenance of stream characteristics came before the court in 1906. In *Baer Bros. Land & Cattle Co. v. Wilson* the court held that both junior and senior appropriators had the right to insist on the substantial maintenance of the stream conditions existing at the time they made their appropriations, and that prior appropriators could not enlarge their appropriations as of the original appropriation priority date if such action would interfere with the rights of juniors.

Five significant cases were argued before the courts in 1907: four before the Colorado Supreme Court, and one before the United States Supreme Court. The first provided that water may be appropriated for subsequent sale to individuals for beneficial use. The second, according to the 1953

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80/ 38 Colo 101, 88 Pac 265(1906).
Colorado Revised Statutes\(^{83}\) was the basis for the adjudication statute. In the third case,\(^{84}\) according to Hutchins\(^{85}\) "the appropriator had made a contract with the mine operators to haul and remove water out of the mine; had removed it to a stream, and had subsequently been the first appropriator of that water. The court held that the contract was superfluous, and that the appropriation was valid." The decision was based on the decision on Platte Valley Irr. Co. v. Buckers Irr. Mill & Impr. Co., 1898, and on the statute\(^{86}\) dealing with mine waters which declared that waters removed from a mine and put subsequently beyond the control of the mine operator were subject to appropriation.

The decision in Fort Lyon Canal Co. v. Chew (1905) was re-enforced in Bowman v. Virdin,\(^{87}\) permitting exchange or loan of water between appropriators provided no injury to vested rights occurred from such action.

The fifth 1907 case was Kansas v. Colorado.\(^{88}\) A basic point in this case was that the United States, as it has done in other cases, reaffirmed the belief that each state has the right to adopt its own water law system, even though public lands were involved. The basic problem which fomented litigation

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\(^{83}\) Colorado Constitution, art. XVI, s. 5.

\(^{84}\) Ripley v. Park Center Land & Water Company, 40 Colo 129, 90 Pac 75 (1907).

\(^{85}\) Op cit., p. 213.

\(^{86}\) Colo Stats Ann, 1935, c. 110, s. 212.

\(^{87}\) 40 Colo 247, 90 Pac 506 (1907).

\(^{88}\) 206 US 46 (1907).
was the fact that Kansas recognized the riparian doctrine with regard to ground water supplies, while Colorado held almost exclusively to the appropriation doctrine. Kansas claimed that diversions in Colorado were depleting the ground water flow below the river, and thus were interfering with vested riparian rights in that state. The Supreme Court held in favor of Colorado, maintaining that "the contention on the part of Kansas that beneath the surface there is, as it were, a second river with the same course as that on the surface, but with a distinct and continuous flow as if a separate stream" was not warranted by the evidence, and that, in fact, "they" were the same stream. The court further held that the diversions by Colorado thus replenished the river flow by return flow, but stipulated that litigation could be re-opened upon increased diversion by Colorado appropriators.

In 1908, the Colorado Supreme Court proceeded to exhibit the "reasonableness" of the appropriation doctrine in the Sterling v. Pawnee Ditch Extension Co. case \(^{39}\) by holding 1) that domestic use does not have to be on riparian lands to gain preference as listed in the Constitution, and 2) that as stated in the Constitution, no preference for domestic use may be exercised without full compensation to prior appropriators.

\(^{39}\) 42 Colo 421, 94 Pac 339(1908).
According to Breitenstein, the first statement that in order to obtain an appropriation there must be diversion was in Windsor Res. & Canal Co. v. Lake Supply Ditch Co., although the wording of the decision seems to indicate that the court had previously held this point to be valid. Regardless of when it was first decided, the point appears to overrule the decision in Thomas v. Guiraud (1883) which held that the method of diversion was "immaterial." This decision appears also to have had an important bearing on the recreational use of water as noted in Cascade v. Empire Co. in 1910.

Resolution of the Due Process Clause of the United States Constitution and the appropriation doctrine was partially worked out in Sternberger v. Seaton Mountain & Co., where the court held that the point of diversion may be on another's land, but the appropriator must first secure the consent of the landowner for the necessary right-of-way and diversion.

Again according to Breitenstein the first case of appropriation of flood waters was argued in Humphreys Tunnel and Min. Co. v. Frank. The court held that the user of stream flow, construct diversion ditches the priority of which was the first date of use of such waters for irrigation.

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91/ 44 Colo 214, 98 Pac 729(1908).
92/ 45 Colo 401, 102 Pac 168(1909).
93/ op. cit., p. 346.
94/ 46 Colo 524, 105 Pac 1093(1909).
While earlier cases had protected junior appropriators against injury from changes in point of diversion, the court held in Dietz v. Hartbauer that both senior and junior vested rights could be so protected against such injury.

Although not brought before the court yet, the celebrated Wyoming v. Colorado of 1922 was taking shape at this time. Actually, the first idea which ultimately led to the litigation between the two states occurred in 1897 when the idea of the Laramie-Poudre Tunnel was first conceived. It grew slowly, but gradually gathered steam, and capital, and by October, 1909, the work on the tunnel was near enough to completion to be considered as constituting "due diligence." The United States Supreme Court in 1922 thus awarded this date as the date of priority for that trans-mountain diversion. The suit first entered the courts in 1913, and was not finally decided for nine years. The specific decision of the court in this case follows in its correct chronological position, in 1922.

Problems continued to arise, and they became more and more complicated. A fine example is that Vogel v. Minnesota Canal & Res. Co. Based on previous decisions, the court held that waters after escapement from an appropriator's works or premises are subject to appropriation upon reaching a natural stream and that the junior appropriator of such

26/ 47 Colo 534, 107 Pac 1108(1910).
waters is entitled to maintenance of stream conditions as they were at the time of his appropriation. Thus, the senior appropriator could not change his point of diversion. Again, this would seem to overrule an earlier decision in Habee v. Platte Land Co. in 1902.

In Broad Run. Inv. Co. v. Deuel & Snyder Impr. Co.27/ the court held, as in Humphreys Tunnel & Min. Co. v. Frank (1909) that such appropriation was valid only if filed in adjudication proceedings. This is an extremely important point, for if the appropriation is not properly filed, there is no proof of appropriation and no protection for the appropriator.

One of the more complicated cases in Colorado came before the court in 1910. Windsor Res. & Canal Co. v. Hoffman Mill. Co.28/ involved a sale of a water right between those two companies, one situated above and one situated below Fort Collins on the Cache la Poudre River. Apparently the sale of the right moved the diversion upstream, and the seller then appropriated the return flow from the upstream mill. The court held, according to the 1953 Colorado Revised Statutes29/ that:

Where water is appropriated for the operation of a mill, it is subject to subsequent appropriation to take effect when the waters are not needed by the mill

28/ 48 Colo 82, 109 Pac 422(1910).
29/ Colorado Constitution, art. XVI, s. 6.
owner; and the first such appropriation thereof to beneficial use is the first in right, without regard to his position above or below the mill intake. Such mill owner may not dispose of his right except subject to such further right of appropriation.

Two points were decided in Snyder v. Colorado Gold Dredging Co. 100/ The first point was that an established diversion and ditch on public lands which are subsequently patented cannot be affected themselves, nor can the water right be affected by such patenting. The second protected the new patent holder, stating that the size of the ditch could not be increased, nor could the ditch be moved, nor the amount of water increased without condemnation proceedings.

The following quotation is taken from Headnote No. 4 in Cascade v. Empire Co. 101/ Even though the case was later overruled in a countersuit in 1913, it is interesting to study this case, as it is among the earliest of its kind found in Colorado.

Complainant owned several hundred acres of land, which it improved at great expense for a summer resort. On the lands is Cascade canyon through which a small, precipitous stream flows. The seepage from the flow of the stream and the mist and spray from its falls produces a luxuriant and exceptionally beautiful growth of vegetation on the floor and sides of the canyon, thus rendering the canyon and the stream with its falls flowing through it rare in beauty and the chief attraction of the resort, and they were so advertised by complainant. Held, that such use of the canyon and the stream and its falls therein constituted a "beneficial use" and operated as an appropriation of the waters in said stream.

100/ 181 Fed 62 (1910)
within the requirements of the Constitution Colorado Art. 16, s. 6, conferring the right to divert unappropriated waters of any natural stream to beneficial uses, and that said waters could not thereafter be impounded above the canyon and falls and piped away by defendant and used to generate electricity for sale as a commodity.

It is interesting to note that this decision appears to overrule an earlier decision which held that in order to obtain an appropriation, there must be diversion from the stream. Apparently the court felt this way also, for, as mentioned, the decision was eventually reversed.

The court further elaborated on two earlier cases (Habee v. Platte Land Co., 1902, and Vogel v. Minnesota Canal & Res. Co., 1910) in Green Valley Ditch Co. v. Schneider. The court held that the use of waste or return flow by a lower claimant does not obligate the upper owner to continuously supply that flow in time or in quantity when acting in good faith, i.e., without malice.

The decision in Wheldon Valley Ditch Co. v. Farmers' Pawnee Canal Co. recognized that diversion and appropriation might be accomplished, but that beneficial use might be delayed by one or more years in the case of reclamation lands and that thus a reasonable amount of time may elapse between filing and beneficial use. This did not say that such was necessarily the case, but that if the filing was followed by due diligence, the priority could be the date of filing.

102/ 50 Colo 606, 115 Pac 705(1911).
103/ 51 Colo 545, 119 Pac 1056(1911).
This, of course, was an important point as far as trans-
mountain diversions were concerned because of the long time 
required to construct tunnels and other diversion facilities. 
It also protected the filer's investment in his construction work.

With regard to section 7 of the Constitution, the court held in *Lyons v. Longmont*\(^{104/}\) that that section was self-
executing, and that one municipality may condemn a right-of-
way through another municipality for the construction and 
conveyance of domestic water supplies upon payment of just 
compensation.

In 1912, pending an investigation to assist legislation, 
the court held that such appropriation of funds was valid 
since the state always retained the property rights in and 
the right to distribute the use of waters of natural streams.\(^{105/}\)

One of the points of law brought about by the Recla-
mation Act, and decided by the federal courts, was that lands 
condemned under this law for a ditch right-of-way belonged to 
the public.\(^{106/}\)

In 1913, the court held in *Green Valley Ditch Co. v. 
Frants*\(^{107/}\) that presumption of intent to abandon a water right 
may be based on nonuse for a reasonable period of time, barring 
proof to the contrary.

\(^{104/}\) 54 Colo 112, 129 Pac 198(1912).
\(^{105/}\) *Stockman v. Leddy*, 55 Colo 24, 129 Pac 220(1912).
\(^{107/}\) 54 Colo 226, 129 Pac 1006(1913).
Also in 1913, the court held in *Comstock v. Ramsey*\(^{108/}\) that return flow is public water. This interpretation necessarily followed from previous court decisions which held that any tributary waters were appropriable. The court said:

> The moment they (return flow waters) are released by a user under an appropriation from the river, which has been duly decreed, and start back in their course to the stream, they become and are as much a part thereof as when they actually reach the stream.

The court also held that this interpretation held for reservoir seepage waters as well. The decision appears to be a fine testimonial to the worth of the appropriation doctrine, which has some strong points of flexibility and, in its legal development, as herein presented, leads to simple, logical settlement of conflicts.

However, the doctrine can also lead to some logical conclusions which are rather startling and, particularly from some resource-users' points of view, untenable. Such is the case in *Empire Water & Power Co. v. Cascade Town Co.*,\(^{109/}\) the countersuit of the 1910 case, brought before the federal courts in 1913. In this case, the court held that esthetic "use" of water was not beneficial use, thus overriding the earlier case. The result of this decision would appear to permanently prohibit appropriation of water for recreational use unless a bona fide diversion is made, as was held in many prior decisions.

\(^{108/}\) 55 Colo 244, 133 Pac 1107(1913).
\(^{109/}\) 205 Fed 126(1913).
The fast-growing city of Denver, prior to 1914, had filed on western slope water and proceeded to construct transmountain diversion facilities. Of necessity, these were (and continue to be) long range plans, and appropriation and construction must begin in advance of the foreseeable need for increased supplies. One case concerning this problem came before the court in 1914 in which it was held that the city may sell or lease water covered by its appropriative rights under temporary contract, thus retaining its appropriation as of its original priority, and not wasting water.

It would seem that the Colorado Supreme Court wished to settle once and for all the question of waste and seepage waters, for In re German Ditch and Res. Co., in 1914, it held, where a question had been raised concerning whether a "natural stream" could be entirely composed of such waters, that:

The volume of these streams is made up of rains and snowfall on the surface, the springs which issue from the earth, and the water percolating under the surface, which finds its way to the streams running through the watersheds in which it is found.

In addition, the words "natural stream" as used in the constitution were intended to be used in their broadest sense and include within their definition all the streams of the state supplied in the manners above referred to, including tributaries and the streams draining into other streams.

111/ 56 Colo 252, 139 Pac 2(1914).
It will be noted too, that this decision also included dif-
fused surface waters at the moment they enter the soil and
become percolating waters.

Also in 1914, the court held in Ironstone Ditch Co. v.
Ashenfalter, 112/ that one who constructed a ditch to collect
seepage water that would not flow naturally upon their re-
lease from an upper user into a natural stream could appro-
priate such waters from an "extraneous" source, and could sell
the right to or use the waters so collected. This is not to
say that such waters are outside the general framework of the
appropriation doctrine, but rather that a new source of water
supply has been discovered, and the appropriator is entitled
to protection under the provisions of the doctrine as deter-
mined by the courts in parallel cases.

The court reaffirmed its stand on abandonment in 1916
in Affolter v. Rough & Ready Ditch Co. 113/ It held that the
portion of the right alleged to have been abandoned must be
established by "clear and unequivocal evidence" and not merely
lapse of time. Obviously, however, this point remains quite
unclear, and continued to come before the courts for a clearer
statement of policy.

In Ft. Collins Co. v. Larimer & Weld Co's., 114/ the
court held that appropriations made prior to the adoption
of the Constitution, but decreed after its adoption, were

112/ 57 Colo 31, 140 Pac 177(1914).
113/ 60 Colo 519, 154 Pac 738(1916).
114/ 61 Colo 45, 156 Pac 140(1916).
subject to the same regulations as all other appropriations. This, however, does not hold that appropriations must be filed in the court records in order to enjoy the protection of the law, as stipulated in earlier cases.

In 1916, a carrier ditch company attempted to get the court to hold that since it could establish rates, it therefore owned the water carried in the ditch. The court held otherwise stating that the ownership of the water right vested in the divertor and user of the water, not the carrier ditch company.

A significant statute enacted in March of 1917, stipulated that it was unlawful for a person or a corporation to divert water outside of the state. This statute was apparently overruled by the court in 1922 in Weiland v. Pioneer Irrigation Co. and other subsequent cases.

In North Boulder Farmers' Ditch Co. v. Legget Ditch & Res. Co. the court held that upon abandonment of a water right, that right reverts to and remains in the stream as a part of the public waters of the state and is subject to subsequent appropriation as provided for in the constitution.

From 1922 to the Present

The year 1922 was perhaps a turning point in the history of all western states' water law. The year saw four important developments, the first apparently necessary to and

116/ 6 C.R.S. 430, art. 1, 147-1-1, 1953.
117/ 63 Colo 522, 168 Pac 742(1917).
far more important than the others. This was the well-known case of *Wyoming v. Colorado*118/ which was before the court for nine years, and subsequently brought before the court no less than four times in addition. An excellent documentation of this case is to be found in the Department of Interior's publication on interstate streams119/ but, boiled down to simple terms, the court held that on an interstate stream, the waters should be appropriated between the two states according to the appropriation doctrine which both states recognized as if the stream lay wholly within one state. A large volume of evidence was submitted to the court, and the arguments were many in number, and quite lengthy. The court apparently found much fault on both sides, yet within five and one-half months after the decision was given, the Colorado River Compact was ratified, and only three days after that, the La Plata River Compact secured agreement. The decision, incidentally, also held that since the plans for the Laramie-Poudre Tunnel had been materially changed since the first date of submission, that the date of priority would have to be moved up to the date of the new plans, and the appropriation decreed by the court was thus limited by prior appropriations both in Colorado and Wyoming. The two corporations constructing the Tunnel were co-defendants in the suit and were, in fact, substantially upheld by the court in their diversion plans.

118/ 259 US 419, 66 L. Ed. 999, 42 S. Ct. 552(1922).
119/ Witmer, *op. cit.*, pp. 593-636.
The Colorado River Compact, adopted on November 24, 1922, was the first interstate compact in United States. The need for such document was based on the otherwise insecure investment in mammoth water diversion facilities by the various states within the Colorado River basin, especially in California and Colorado.

For purposes of administration, the Compact divides the basin first, into two divisions for use of water with a preference listing of agriculture and domestic supply, power, and navigation, in that order; and second into two basins, based on drainage. The "states of the Upper Division" included Colorado, New Mexico, Utah and Wyoming, and the "states of the Lower Division" included Arizona and California and Nevada. Lee Ferry, Arizona, was the dividing point between the upper and lower basins, with the former consisting of parts of Arizona, Colorado, New Mexico, Utah, and Wyoming; and the latter including parts of Arizona, California, Nevada, New Mexico, and Utah. The over-lapping of states creates some confusion but is inevitable under the terms of the Compact. The division into Basins is most commonly used in discussion about the Compact.

Essentially, the Compact provides for apportionment of the River waters as follows: 7,500,000 acre-feet to be used for beneficial consumptive use in the Upper Basin states, and an equal amount for the Lower Basin states. In addition, if

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required, 1,500,000 acre-feet must go to satisfy an international agreement with Mexico in which country the River has some drainage area: in time of water shortage, this amount must be borne equally by the two Basins. The Compact further provides that the Upper Basin states shall not allow the total flow of any ten consecutive years to fall below 75,000,000 acre-feet at Lee Ferry. Any unappropriated or unappropriated waters over and above the 16,500,000 acre-feet per year provided for above were to be considered for further apportionment on October 1st, 1963. It is now evident, however, that the flow apportioned by the Compact was based on a high cycle of streamflow measurements on the Colorado, and there isn't even that much flow on the average.

With the exception of the litigation engaged in by Arizona and California, which has proceeded now for more than 40 years, the Compact seems to have held up admirably, particularly with regard to its early date, and the large number of states and interests involved. In addition to the many safeguards provided for in the Compact, one deserves special mention: it is specified in the Compact that "Present perfected rights to the beneficial use of waters of the Colorado River are unimpaired by this Compact."
On November 27, 1922, the La Plata River Compact was ratified. The La Plata rises in the La Plata Mountains northwest of Durango, Colorado, and flows south to join the San Juan River near Farmington, New Mexico. The Compact provided for rotation of water, "a practice common in water-short areas": each state has unrestricted use as long as 100 c.f.s. crosses the state line. At other times, each state is entitled to one-half of the total, unless the respective State Engineers agree upon a rotation system, giving 100 per cent of the flow first to one state for a specified period, and then to the other. Out of this compact grew one of the longest and most complicated suits to be brought before the courts: in La Plata River, etc., v. Hinderlider in 1933 an extended series of suits and countersuits began over whether an interstate compact could, under the rotation system, supercede private appropriative rights within a state. The United States Supreme Court held in the affirmative on this.

The fourth development in 1922 was the decision in the Weiland v. Pioneer Irrigation Co. case by the Supreme Court which held that the State Engineer of Colorado could not interfere with a Nebraska corporation's appropriation of water within Colorado and diversion to lands within Nebraska for irrigation purposes. Apparently based on the decision in Wyoming v. Colorado, the Court decided that since the appropriation doctrine was the rule in both states, the sole

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121/ 43 Stat 796, Colo Laws 1923, p. 696.
determination of legality of appropriation was its priority, without regard to state lines. In fact, this decision probably does not overrule the earlier decision by the Colorado court in Lamson v. Vailes (1900) since in that decision the court merely evaded the issue.

In a 1923 decision the Colorado court held that a landowner had the right to protect his land and to improve it for agricultural purposes by drainage of diffused surface waters if the injury caused to a lower land owner would not be greater than that caused by the waters' natural drainage.

On April 27, 1923, the South Platte River Compact was ratified. According to Moses the Compact "...gives the winter flow (from October 15 to April 1) first to Colorado, with the balance to Nebraska, and limits Colorado, during the period April 1 to October 15 to decrees earlier than June 14, 1897, unless more than 120 c.f.s. passes the state line, and provided further that Nebraska needs the 120 c.f.s. Nebraska gets any surplus not needed by Colorado." This compact has apparently been most satisfactory to both states, and has resulted in no serious litigation. Perhaps the reason for this is that Colorado substantially increases the flow of the South Platte by diversions, and also because the majority of Colorado's uses are non-consumptive, a high percentage of return flow resulting from municipal, industrial, and irrigation use.

In Haver v. Hatonock, the court held that if spring waters arise on a landowner's land and are used thereon for twenty years, the landowner may seek an injunction against a subsequent appropriator of that supply. This concerned spring waters which would not reach a natural stream, as contrasted with tributary spring waters which are dealt with, for example, in Nevius v. Smith in 1929.

The first decision in "made" or "developed" waters came before the supreme court in 1928. In this case, an irrigation diversion carried waters to a point from which the return flow could not naturally return to the stream. The court held that a person draining the land, and collecting those waters and returning them artificially to the stream was entitled to them as against prior appropriative rights on that stream. As in Ironstone Ditch Co. v. Ashenalter (1914), such waters would be considered an extraneous source.

In 1928, the Boulder Canyon Project Act was adopted. The need for such an Act was necessitated by the fact that Arizona refused to ratify the Colorado River Compact, holding that the Gila River, which lies almost wholly within Arizona, was not intended to be included in the terms of the Compact. With Arizona refusing to sign the Compact, no apportionment of the waters of the Colorado could be effected, nor could construction of facilities to utilize the water take place.

126/ 79 Colo 194, 244 Pac 914(1926).
The Act authorized the construction of Hoover (Boulder) Dam and the All-American Canal if 1) all seven Colorado Basin states ratified the Compact within 6 months, or 2) ratification by six states if California would pass a statute of limitations on her apportionment. The latter alternative was chosen, and was approved by Presidential proclamation in 1929.

Since the court had previously held that diffused surface waters were subject to capture and ownership outside the framework of the appropriation doctrine, it was asked, in Nevius v. Smith\(^{129/}\) to determine whether a landowner could not claim those waters as against an appropriator once they had percolated and entered the stream. The court maintained otherwise, holding valid appropriations to be superior to the landowner's claim to such waters.

In Denver v. Colorado L. & L. Co.\(^{130/}\) the city sought to move its acquired point of diversion for power and irrigation purposes. The court held that the burden of proof that no injury would result to junior appropriators was on the plaintiff, and that the junior appropriator not only had a vested right in the stream conditions at the time he made his diversion, but also had a vested right in return flow resulting from appropriations existing at the time he made his appropriation. This apparently was a case of "developed"

\(^{129/}\) 86 Colo 178, 279 Pac 44(1929).
\(^{130/}\) 86 Colo 191, 279 Pac 46(1929).
waters on the part of the junior appropriator, since no
evidence of overruling earlier decisions could be found
concerning the point that junior appropriators are entitled
to vested rights in time of appropriation only, and not in
a guaranteed quantity.

An attempt in 1929, in Handy Ditch Co. v. Greeley &
Loveland Irr. Co. 131/ to obtain a ruling on the relative
preference of storage and direct-flow rights resulted in the
court holding that an appropriator cannot claim storage rights
for even temporary periods under an appropriation for direct
irrigation. This point was eventually settled in 1936 in
People ex. rel. Park Reservoir Co. v. Hinderlider.

The court further upheld the decision in the above
Trinchera Dist. 132/ holding that the burden of proof that no
injury resulted because of a moving of a point of diversion
to a junior or a senior appropriator was on the person seeking
to make the change.

Upholding its earlier decision in 1928 concerning "de-
developed" waters, the court held in Leadville Mine Dev. Co. v.
Anderson 133/ that the developer must prove that he in fact
developed the water supply. The waters in question arose
from the construction of a tunnel, and the decision affirmed
the right of the person who increased the natural flow of

131/ 86 Colo 197, 230 Pac 481(1929).
132/ 89 Colo 170, 300 Pac 614(1931).
133/ 91 Colo 536, 17 P2d 303(1932).
the stream, to use and appropriate that water in the amount of the increase,

but to entitle him to such use, he must prove that the water thus added to the stream was produced and contributed by him, and that if not interfered with, but left to flow in accordance with natural laws, it would not have reached the stream; and he must prove this by clear and satisfactory evidence.

It is clear that the decision in this case will have an important bearing on subsequent cases concerning "made" waters. Notably, in situations where water yield may be increased via manipulation of vegetation or by increasing precipitation by cloud seeding programs. In either case, the person seeking to appropriate such waters will have to prove first the quantity involved, and second that he did in fact make such waters available.

An interesting and extremely complicated situation came before the court in Joseph W. Bowles Reservoir Co. v. Bennet.\textsuperscript{134} It is best summarized here from the following brief, inclusive statement from Hutchins:\textsuperscript{135}

In a recent Colorado case (note 134 below) a prior appropriator diverted water from a reservoir by means of a gravity outlet pipe and also used the reservoir as a conduit for water entering a ditch. Junior appropriators diverted from the reservoir by means of pumping. The quantity of water in the reservoir above the level of the prior appropriator's outlet pipe was sufficient to satisfy his decreed right, and the quantity below the level of the outlet was sufficient for the junior appropriators. The latter threatened by means of their pumping to lower the water level below the outlet pipe. It was not feasible to lower the pipe; Hence, if the water level

\textsuperscript{134} 92 Colo 16, 18 P2d 313(1932).
\textsuperscript{135} Op. cit., p. 171.
were so lowered in the reservoir, the prior appropriator would be prevented from satisfying his right from the reservoir, and his ditch entering the reservoir would be rendered useless. The court held that, both upon principle and authority, the senior ditch and reservoir rights were being unlawfully interfered with; they were being practically nullified by the junior appropriators; and the senior appropriator could not against his will be compelled to bear the expense of pumping water upon its lands which by gravity would reach them if it were not for this unwarranted interference with its prior right.

The court further stated that the only way the junior appropriators could continue pumping would be upon payment of just compensation to the prior appropriator.

While earlier decisions had been made concerning changes in places of diversion, Hassler v. Fountain Mutual Irr. Co.\(^{136}\) was apparently the first case in which the court sanctioned changes either in place of use or in the areal extent of the application of the water, if no material injury resulted to vested rights or other appropriators on the stream, and if the amount diverted did not exceed the original decree.

Taking up where it left off in In re German Ditch and Reg. Co. in 1914, the court finally applied the appropriation doctrine to percolating waters in Faden v. Hubbell\(^{137}\) in 1933. The diversion in question by the defendant, a senior appropriator, was being deepened by him, the result of which was to change the "lines of underground flow" and to thus reduce the water level in the draining stream. The court found

\(^{136}\) 93 Colo 246, 26 P2d 102(1933).

\(^{137}\) 93 Colo 358, 28 P2d 247(1933).
in favor of the junior appropriators who had a vested right in the conditions of the stream as they were when they made their appropriations, and that the senior appropriator had no right to interfere with them. The need for resolution between appropriation of ground and surface waters was brought still closer by this decision which followed logically from previous decisions. In addition, the court maintained that the purpose of the senior appropriator's diversion, for the propagation of fish, was a beneficial use and entitled to the protection and regulation as provided for in the Constitution.

In 1934, the court held in *Kountz v. Olson*¹³⁸/ that an uncompleted title to the land upon which appropriated water is to be used, does not bar the right to appropriated water for beneficial use.

Abandonment of a water right was inferred by the court in *Commonwealth Co. v. Rio Grande Association*¹³⁹/ where the decree was greater than the capacity of the system constructed for diversion and the amount used.

The year 1936 saw the court coordinate direct-flow and storage rights in *People ex. rel. Park Reservoir Co. v. Hinderlider*.¹⁴⁰/ The court maintained in its reversal of the lower court's decision that the only basis for preference was that of priority of appropriation. Thus, in what may seem to

¹³⁸/ 94 Colo 186, 29 P2d 627(1934).
¹³⁹/ 96 Colo 478, 45 P2d 622(1935).
¹⁴⁰/ 98 Colo 505, 57 P2d 894(1936).
some as being unjust, an appropriator who holds a storage
right may continue to divert to fill storage capacity of
his reservoir even though such action works injury on a
junior, direct-flow right. Actually, the decision could
hardly be otherwise in view of previous decisions protecting
the vested rights of senior appropriators.

The United States Supreme Court in Ickes v. Fox maintained that in federal reclamation projects, the United
States is acting as a carrier company, and the water is actually
owned by the individual who applies the water to beneficial
use. This decision was upheld in countersuit in 1943.

The court held in Bowen v. Shearer that a prescriptive right cannot be established if 1) adverse use was for
less than the statutory period, and 2) if there was sufficient
water for all claimants during the period. This decision
appears to almost completely preclude any prescriptive rights
developing from adverse use in Colorado.

There seems to be little doubt that the courts, with
well-informed witnesses, have kept pace with the increasing
knowledge, and sometimes apparently ahead of it, in the science
of hydrology. In 1937 the court held that:

The Las Animas Company would have the water officials
and the courts make some distinction herein between
seepage water and other water in the natural stream.
The law makes none and nature forbids it.
Also in 1937, the Water Conservancy District Act was passed. One of the important provisions of the Act was that no diversion may be made by an entity established under the provisions of the Act outside of the natural drainage basin unless compensation or replacement storage is provided for to protect 1) existing rights, and 2) potential consumptive uses in that basin. Such stipulation has been adhered to in the Colorado-Big Thompson Project, for example, with the construction and operation of the Green Mountain Dam and reservoir on the western slope to provide replacement waters for prior rights on the Colorado River.

Another significant law passed in 1937 authorized the establishment of the Colorado Water Conservation Board, with the following condensed enumeration of its functions:

1) To appraise and inventory the State's water resources and develop programs for their conservation, utilization, and control.
2) To formulate and further a continuing State policy with respect to water development programs and problems, both intrastate and interstate.
3) To promote water projects and in connection therewith conduct investigations, make surveys and studies, and review and make official State comments upon projects reports of Federal agencies.

And, in addition, to cooperate with all other interested and affected groups, parties, and governments in attaining these principal objectives.

\[^{145/}\text{Colo Laws, 1937, c/ 266, s. 13; as amended, Colo Laws, 1943, c. 191, s. 1.}\]

In the appeal\(^{147}\) of the countersuit\(^{148}\) of the La Plata River & Cherry Creek Ditch Co. v. Hinderlider case\(^{149}\) the United States Supreme Court held that the La Plata River Compact's provisions for rotation of water use when water was in short supply was valid and that appropriation of supply above that specified as the equitable apportionment in the Compact could not be protected by the state courts.

The Rio Grande River Compact,\(^{150}\) adopted on March 18, 1938, established a compact commission to administer the agreement between the states of Texas, New Mexico and Colorado, and the United States which was an interested party in view of the management of Indian lands within the Basin. The Compact involves the San Luis Valley in Colorado in which the Rio Grande River originates. The Compact was not "to be construed as affecting the obligations of the United States of America to Mexico under existing treaties or to the Indian tribes, or as impairing the rights of the Indian tribes."

Beyond these points, the Compact was extremely complicated, much more so than its predecessors. In fact, the system of credits, debits, storage, spills, capacities, and releases spelled out

\(^{147}\) Hinderlider v. La Plata River & Cherry Creek Ditch Co., 304 US 92, 82 L. Ed. 1202, 58 S. Ct. 805 (1938).
\(^{148}\) Hinderlider v. La Plata River & Cherry Creek Ditch Co., 101 Colo 73, 70 P2d 849 (1937).
\(^{149}\) 93 Colo 128, 25 P2d 187 (1933).
\(^{150}\) 53 Stat 785, Colo Laws, 1939, p. 489.
by the Compact are so detailed as to place undue difficulties
upon the commission which has thus been severely hampered in
its effective operation. The situation does not appear to
have been rectified as of 1959.151/

In Twin Lakes Reservoir v. Sill152/ the court held that
natural streams may be used for carriage of water as long as
the increased volume of flow does not injure "others" when
that flow exceeds the ordinary high water mark of the stream.
Obviously, the terms herein are quite difficult to define,
much less to prove violation of.

Several important points were decided by the court in
Denver v. Sheriff153/ in 1939. The court held that:

The term "beneficial use" is not defined in the
Constitution. What is beneficial use, after all,
is a question of fact and depends upon the circum-
stances in each case.

The court further held that the appropriation doctrine knows
no geographical bounds, and that water may be diverted for
beneficial use from the western to the eastern slope; that
appropriation over and above need for a reasonable time by a
municipality constitutes a beneficial use; that a municipality
may temporarily lease such waters just mentioned to be in
excess of present need; and that "the municipality is the
owner of the water rights and no relation of carrier and con-
sumer is involved."

151/ Moses, op. cit.
152/ 104 Colo 215, 89 P 2 d 1012(1939).
153/ 105 Colo 193, 96 P2d 836(1939).
The court had recently held that water rights may be appurtenant to the land, which was in conflict with some earlier decisions. This matter was apparently cleared up in Denver Joint Stock Land Bank v. Markham where the court held that the "water rights may or may not be appurtenant to the land, and may or may not pass with conveyance of the land title, depending upon the intent of the grantor."  

Wyoming had frequently sought injunctions against Colorado for violating the decrees handed down in the Supreme Court decision of 1922. The most recent case was in 1940 in which the court held that the amount apportioned in acre-feet in 1922 was the amount at the point of diversion and "not the consumptive use after credit for return water."

Colorado, Kansas, and Nebraska adopted the Republican River Compact on December 31, 1942. The Compact provided for normal flows of the various tributaries of the Republican River, and for the control of those and excess flows. An unusual feature of the Compact was the citation therein of the decision in Weiland v. Pioneer Irr. Co. (1922) stating that that decision was binding upon all the states. As with other interstate comity, and to provide for maximum beneficial use of the water resource, without resorting to costly litigation.

154/ 106 Colo 509, 107 F2d 343 (1940).
155/ Hutchins, op. cit., p. 386
157/ Public Law 60, 78th Congress, c. 104; Colo Laws, 1943, p. 362.
In the 1907 litigation between Kansas and Colorado, the Supreme Court did not make any allocation of the waters of the Arkansas River between the two states. It refused to do so again in Colorado v. Kansas\(^{158}\) in 1943. The court recognized that while a large share of the River's flow was used in Colorado, it was not transported outside of the Basin, and a large part thereof found its way to Kansas via return flow. The court said that the evidence did not substantiate Kansas' claim that Colorado had increased its appropriation from the river since 1907; that a decision in favor of Kansas would cause productive lands in Colorado to go out of production; and that "the benefit to Colorado in the reclamation of arid lands has been great, and ought not lightly be destroyed."

One of the most heatedly argued interstate compacts involved Costilla Creek, tributary to the Rio Grande, adopted on September 30, 1944.\(^{159}\) The creek rises on the west slope of the Sango de Cristo mountains, crosses the border into New Mexico, passes through Costilla Reservoir, re-crosses the border into Colorado where the major irrigated area is situated, becomes at times intermittent, and re-crosses the border again into New Mexico just before joining the Rio Grande. This complex geographical-political conflict is furthered by the fact that the Costilla Reservoir was constructed by a Colorado

\(^{158}\) 320 US 383, 88 L. Ed. 116, 64 S. Ct. 176(1943).
\(^{159}\) Costilla Creek Compact, Public Law 408, 79th Congress, 2d session, c. 238; Colo Laws, 1945, p. 278.
company, reverted to the State of New Mexico for non-payment of taxes, and was sold to the New Mexico water users' association, who now own the reservoir, but not the water therein. The Compact attempted to apportion the stream's flow based on priority in the two states in considerable detail. Again, the result has not been wholly effective, and some conflict over Costilla Creek continues.

Having failed to negotiate a compact concerning the flow of the North Platte River, litigation has continued for a long time between Nebraska, Wyoming, and Colorado. The United States Supreme Court, in *Nebraska v. Wyoming*, held that while it had refused to enter decrees apportioning the river's flow in previous cases, it would do so in this case, and did. More important than the actual decrees, however, is the implication of the following quotation from the decision, outlining the future course of events in water rights litigation:

*Claim of the United States to Unappropriated Water.* The United States claims that it owns all the unappropriated water in the river. It argues that it owned the then unappropriated water at the time it acquired water rights by appropriation for the North Platte project and Kendrick Project. Its basic rights are therefore said to derive not from appropriation but from its underlying ownership which entitles it to an apportionment in this suit free from state control. The argument is that the United States acquired the original ownership of all rights in the water as well as the lands in the North Platte basin by sessions from France, Spain, and Mexico in 1803, 1819 and 1848, and by agreement with Texas in 1850. It says it still owns those rights in water to whatever extent it has not disposed of them.

*160* 325 US 588, 89 L. Ed. 1815, 65 S. Ct. 1332, Colorado impleaded(1945).
The court then proceeded to assert its rights under federal reservation privileges, and indicated "that there may be unappropriated water to which the United States may in the future assert rights through the machinery of state law or otherwise." Under such a vague threat, any appropriation is insecure. In this particular case, however, the Court asserted that the North Platte was indeed over-appropriated at the time, but the implications in the above quotation are that if the river was not fully appropriated at the time of the federal reservation, then the United States could make its claim good.

Returning to the workings of the appropriation doctrine in Colorado itself, the Colorado court held in 1948 in *Archuleta v. Boulder & Weld Co. Ditch Co.* 161/ that maps filed in connection with water rights "do not constitute an appropriation nor does lack thereof invalidate them." This quote, from the 1953 Colorado Revised Statutes, 162/ would indicate that this was the first time this point appeared before the court.

On October 11, 1948, the upper Colorado River Basin Compact 163/ was adopted, giving, of the total amount allocated to the Upper Basin States under the Colorado River Compact of 1922, 51.75 per cent of the flow to Colorado, 11.25 per cent.

161/ 118 Colo 48, 192 F2d 98(1949).
162/ Colorado Constitution, art. XVI, s. 5.
163/ Public Law 37, 81st Congress, 1st session, c. 48; Colo Laws, 1949, p. 498.
to New Mexico, 23.00 per cent to Utah, and 14.00 per cent to Wyoming, after giving 50,000 acre-feet to Arizona. The Compact, having assured Colorado as well as the other states of an equitable apportionment, paved the way for the multi-project Upper Colorado River Storage Project. The Compact also strengthened the 1922 Compact by providing for an administrative commission to make findings of facts, conduct surveys and to provide a common forum for the upper division states. The Compact further recognized the provisions of the prior La Plata River Compact and its stipulations were in accordance with that previous agreement.

After having been in the courts for more than 40 years, the parties involved in the allocation of water in the Arkansas River became exhausted and adopted the Arkansas River Compact on December 14, 1948. Further, the construction of the John Martin Dam provided a structure for controlling the river flow and thus added an incentive for working out the details of the agreement. The Compact spelled out storage periods for the reservoir, and provided for maximum releases of water therefrom for the benefit of both states; stipulated that Kansas was not entitled to any natural river flow; and that the commission established to effect the provisions of the Compact be made up of three members from each state, plus one to be appointed by the President to represent the United States.

164/ Public Law 82, 81st Congress, 1st session, c. 155.
The final case taken up here before the Colorado court is that of Safrenak v. Town of Limon. In this 1951 case, the court may be said to have finally closed the gap between ground and surface waters, stating that "all ground water situated in (a) stream basin" finds its way to the stream draining that basin and is a tributary thereto. Such waters are thus subject to the laws of appropriation as a part of the waters of that natural stream, and the burden of proof is on the appropriator to show that such waters are not tributary. The court had thus absolutely correlated ground and surface waters and the result is a presently-pending recodification of Colorado water law to be undertaken by the Colorado Water Conservation Board. This job will be similar in type to the task of correlating storage and direct-flow rights undertaken following the 1936 decision in People ex. rel. Park Reservoir Co. v. Hinderlider, but will be far more complex.

A second major problem in Colorado water law dictates that two additional cases be mentioned. The problem is that brought out in the above quote from Nebraska v. Wyoming, namely federal-state conflicts over water rights, and is exemplified by the Pelton Dam Decision. The court argued that the Acts of 1866, 1870, and 1877 applied only to public lands and not to lands "reserved" by the United States, and

165/ 123 Colo 330, 228 P2d 975(1951).
thus the state had no jurisdiction over the dam to be built on such lands, nor over the water of the Deschutes River to be regulated by it. In a dissenting opinion, Mr. Justice Douglas indicated the provisions in the above-mentioned Acts separating the water rights and land titles, and said that the 1910 Power Act did not intend to interfere with those provisions. "The reason" according to this opinion, "why the Court should not construe any law as achieving the recall by the Government of its jurisdiction over rights" 168/
is that the rule adopted by the Court profoundly affects the economy of many States, ten of whom are here in protest. In the West, the United States owns a vast amount of land -- in some States, over 50 per cent of all the land. If by mere Executive action the federal lands may be reserved and all the water rights appurtenant to them returned to the United States, vast dislocations in the economies of the Western States may follow. For the right of withdrawal of public lands granted by the 1910 Act is not only for "water-power sites" but for a host of public projects -- "irrigation, classification of lands, or other public purposes." Federal officials have long sought that authority. It has been consistently denied them. We should deny it again. Certainly the United States could not appropriate the water rights in defiance of Oregon law, if it built the dam. It should have no greater authority when it makes a grant to a private power group.

It should be pointed out that the waters in controversy here were not navigable waters, which are clearly under the jurisdiction of the federal government by law.

The Pelton Dam decision had ramifications in the Denver Blue River Case, settled by agreement, within the year. According to Chilson the federal government had, as of June 30, 1955, withdrawn for one purpose or another more than 23 million acres of the public lands in Colorado. If the water rights on those lands were vested in the act of their withdrawal, many vested appropriative rights would be nullified. As mentioned, a decision was precluded in this instance by an agreement between the parties, but the problem is a long way from being solved.

In Summary

In his statement to the Senate Select Committee on National Water Resources, Felix L. Sparks, Director of the Colorado Water Conservation Board, summarized the water and water rights problems:

In Colorado are found the headwaters of four of the major rivers of the West -- the Platte, the Arkansas, the Rio Grande, and the Colorado. These rivers are the life arteries of the State of Colorado. These rivers or their tributaries are of similar importance to the majority of the States west of the Mississippi River.

Geographically, Colorado occupies a unique position within the continental boundaries of the United States. Waters originating in other States are in nature not available for use in Colorado. On the other hand, all of the surface waters of the State, excepting natural losses, are available by gravity to 18 other States. This itself would not be significant if it were not for the fact that by court decisions and interstate compacts we are compelled to deliver about 50 per cent

169/ Ibid., p. 200.
of our available surface water to other states. This latter observation is not in the nature of a complaint, but is illustrative of how the water resources of a given State may be depleted without internal use. In Colorado, the use of water is governed by the appropriation doctrine. This doctrine is written into our Constitution and statutes and has been generally adopted throughout the Western States. As far back as 1900 the dependable natural flows of the Arkansas, Platte, and Rio Grande Rivers had largely been appropriated. Since that time millions of dollars have been expended in capturing floodflows, and millions more expended in transmountain diversions from the Colorado River.

"The use of water is governed by the appropriation doctrine." This statement virtually summarizes what has been told in the foregoing pages. With the exceptions of 1) mineral or hot springs, 2) "made" waters, 3) diffused surface waters, and 4) non-tributary waters, all of which are subject to capture and ownership, and all of which make up a relatively small percentage of the total waters in the State, the surface and ground waters in Colorado are all under the doctrine of prior appropriation.

Two remaining problems are the resolution of conflicts between vested ground water and surface water rights, and the National problem of settlement of federal-state conflicts over water rights.
As stated in the Introduction, water represents an unusual resource. It is highly mobile, varies in availability from time to time and from place to place, varies in quality, and yet the total amount on the earth's surface is relatively fixed. It represents both a production input and an end-product itself. It may be used in its natural state in its natural channel, or diverted from it; or the energy released by its changes of state may be the goal of use. Its use may be consumptive or non-consumptive, and the laws regulating its use vary with the extent of consumptive use.

It is well to keep these points in mind during the following discussion.

Appropriation vs. Riparian Doctrine

Under the riparian doctrine, no diversion from natural sources is permissible, nor is consumptive use, if such use is considered unreasonable. These statements, of course, must be qualified insofar as exceptions exist. For example, an irrigator may divert water from its natural channel, and the portion not used may return to the channel via return flow. If the resultant decrease in streamflow is not deemed unreasonable by the courts, such diversion and use may continue. However, under the riparian doctrine, such use might
be deemed reasonable today and unreasonable tomorrow. Thus, use of water for consumptive purposes, and by the same argument for diversion outside of its natural watershed, is insecure in the riparian doctrine states without prior agreements or compacts.

Under the appropriation doctrine, on the other hand, consumptive uses represent secure investments insofar as the appropriation of water is sufficiently prior to other diversions to permit continual operation. In the extreme case, the first appropriator of a western stream is almost assured of his future water supply, whereas in the east a water user may be enjoined at any time by a downstream water user if the former's use is deemed unreasonable. For a junior appropriator, however, the western water user can completely lose his water supply, whereas under the riparian doctrine, all water users share short supply equally and no one user is completely cut off.

Where water is considered as an end-product, the situation is different, depending upon the extent of use -- normally consumptive, but often involving diversion outside of the natural watershed area. In the western states, such use is secure. In the eastern states, a potential divertor will go to great expense to ascertain the future security of costly diversion facilities. A case in point is the diversion from the Delaware River for consumption in New York City, where a compact has been agreed upon so as to fully utilize the water resource.
Non-consumptive uses are even more secure in that they allow a certain proportion, if not all, of the diverted water to return to a natural stream where they may be used and reused for the benefit of people downstream. While under the appropriation doctrine such use cannot be unreasonable, any appropriation enjoys far more security for the investor and for the water user than any use under the riparian doctrine.

This difference, of course, is due in part to the availability of water supplies in the two regions where these doctrines are found. The higher pressure on the water supplies of the arid states requires that water should not be wasted and that it should be utilized to the fullest extent possible. In the more humid, riparian doctrine states, the pressure on the water resource has not been so great historically, and the general availability of water has precluded a potential water user going to court to obtain reasonable security for his investment.

Non-consumptive uses under both doctrines, since they return the water to its natural watercourse, are reasonably secure in either case. An exception is the use of water for the production of power which requires storage. In the riparian states this use apparently must be secondary to maintaining downstream flow undiminished in quantity, and in the appropriation doctrine states must release flow for prior appropriators. The timing of the release of flows, however,
presents a different problem in both instances. In Colorado, however, the storage rights have been correlated with direct-flow rights since 1936, and thus diversion for future use may have priority over diversion for immediate use.

Finally, under the riparian doctrine, the operation of flood control networks generally fits in with the desires of water users. This is a result of timing of flood flows, desires of the heavily populated eastern states for recreational opportunities of reservoir sites, etc. Under the appropriation doctrine, the problem of flood control is more acute on the downstream sections of watercourses than on the upper reaches, where appropriation of flood flows is frequently made by junior appropriators who have such rights.

Timber

The management of the timber resource in Colorado is affected by the laws of water rights at present, and may be more involved in the foreseeable future. In the first instance, where the utilization of water supplies in the production of timber is involved, two observations must be made. First, most all of the timber in Colorado occurs at high elevations where the use of water for sluicing or ponding, or for running a sawmill, results in a high proportion of return flow.

Second, there are two observations from an historical standpoint: log transport is better achieved at present by truck and railroad than by water, thus reducing any prior need that may have existed for sluicing; and the possibility
of the construction of pulp mills in the state in the future which require large quantities of water, thus potentially increasing the use of the water resource, although not consumptively. The latter case is presently in the limelight in Colorado; paper corporations have long wanted to establish a pulp mill in Colorado, but cannot afford the costly investment until they are assured of sufficient water supplies -- sufficient in both quantity and quality. True, the pulp mill would in all likelihood be located on a major stream, but the pollution problem is as severe a problem to water users downstream as the supply problem is to the mill. Thus, in the arid states, like Colorado, a potential large-scale water user such as a pulp mill must be assured of both timber and water supplies and is thus affected by the laws regulating the use and development of both resources.

In the future, it is possible that forested areas may be managed for the production of increased water yields as well as for timber. In that instance, it is evident from one of the cases discussed above that the water "produced" from such forest management practices must be proven to be due to those practices, in which case it would fall under the classification of "made" waters which are essentially outside the framework of the appropriation doctrine as it would exist on the stream into which such water is discharged.
Mining

Mining was the first use to which the water resource was put in Colorado and led, as in California, to the appropriation doctrine. From an historical point of view, the implications of water law on mining in the state are not great, since mining activity is generally declining. However, the cause and effect may be reversed since adequate water supplies are essential to mining operations, and the complete appropriation and even over-appropriation of many of Colorado's streams may preclude new mining enterprises. On the other hand, mining near the headwaters of natural streams would result in a high percentage of return flow, although such return waters may be turbid and possibly polluted from the mining operations.

Fish and Wildlife

It is at once apparent from the above review of cases that no water may be appropriated under the law if there is neither diversion nor beneficial use. The courts have held that the recreational use of water, i. e., in its natural setting, does not constitute an appropriation and thus the use of water for natural wildfowl or fish habitat is not recognized. Wildlife do not utilize a significant percentage of water, but the above-cited problems in use of water for wildfowl and fish habitat represent a major recreation resource in the state.
On the other hand, diversion of water to a fish hatchery, for example, constitutes a valid appropriation and it is assumed that diversion for wildfowl refuges would be also. The fact appears to remain, however, that appropriation of water without diversion, or perhaps at least some artificial development of the natural setting of the water resource, cannot be made for recreational purposes per se. An example of this point is the recent destruction of an entire fish population in John Martin Reservoir, when irrigators completely utilized the available supply. In this instance, there was no appropriation of water for the benefit of the fish, nor were there vested rights in the development and utilization of the water in the reservoir for the fish resource.

The necessity for dependable water supplies for the development of recreational opportunities is essential.

Range

The water resource is important to rangeland resources from two standpoints: first, as one of the inputs in the production of forage crops, and second as a direct input for the range livestock. The first case might be considered as a consumptive use of the water by forage vegetation. Good range land requires sufficient soil moisture and, where such does not exist, there is poor range. There are no laws at present which attempt to resolve a conflict between the use
of water for range forage production and some other use, i. e., pumping for a different purpose, primarily because where such conflict might exist, the value of the land itself for one use or another probably governs the use to which it is ultimately put.

Stock watering may be included, under the appropriation doctrine, in riparian lands domestic appropriation rights. This use requires, depending upon the type of livestock, a large number of water holes which may be natural springs, or pumped wells, or tanks holding diverted water. In the arid climate of Colorado's range lands, there is probably a greater loss of such water to evaporation than is used by livestock due to the exposed surface area required to make the water available to the stock. This latter amount is undoubtedly small, but the two "losses" should really be considered together as one use, just as a certain amount of waste is expected and accounted for in irrigation practices.

Irrigable Lands

Irrigable lands, comprising a combination of a valuable soil-water-climate resource in Colorado, are a major natural resource in the state. Most of these lands are located in the eastern half of the state, although there are also considerable areas in the San Luis Valley, along the bottoms of many western slope streams, and a small amount in mountain meadows.
Much of the litigation over water rights in Colorado has concerned the use of water for irrigation, and the state's water district framework was established to facilitate administration of the law.

Irrigation is largely a consumptive use, although considerable portions of the amount diverted may re-appear in the streams as return flow. As unappropriated water supplies diminish, and more irrigated lands are converted to subdivision, and water rights are bought by municipalities, irrigators will have to turn to more efficient methods of diversion, transportation, and use in order to maintain the high benefits realized from irrigation. Such increased efficiency will mean that a higher proportion of the water diverted for irrigation will be consumptive; that less will re-appear as a return flow. The result will be a "snow-balling" effect, for a reduction in return flow will further diminish supplies downstream. At present, transportation loss, or "shrink," is included in the total appropriation, and the appropriator thus bears this loss.

Efficiency of use of water for irrigation purposes is also increased within the state at present by an elaborate system of exchanges between individuals, ditch companies, reservoir owners, and so forth. These are not exchanges of water rights, but of the water itself.

Under the appropriation doctrine, the sale of water rights separately from the land permits considerable lands in the state which are irrigable to revert to dry land status.
Municipalities are the main driving force behind this conversion, since they can afford to pay large amounts for future supplies, and since they are protected by law in purchasing water rights in excess of need, and then leasing those rights until such time as the city involved requires the water. Often such water rights are only sold if the buyer also buys the land. This results in many dry land farms and ranches which are hard to sell and create local taxation problems.

**Water**

As discussed above, the appropriation doctrine permits full development and use of the water resource as contrasted with the riparian doctrine. This development takes place on a first-come basis under the law, and yet is flexible to the extent that since the sale of water rights is permitted, the use to which the water is ultimately put is in part governed by a market for water rights. It is the opinion of the author that water rights presently held by irrigators on the east slope, for example, may well be eventually bought by growing municipalities along the Front Range.

The courts have held that both junior and senior appropriators are entitled to a continuance of the stream conditions which existed at the time they made their appropriation; this may be extended in the future to include water quality, as well as quantity, if it has not already been done. Thus,
the appropriation doctrine will protect downstream water users and ultimately will provide for the optimum utilization of the scarce water supplies in the state.

Once the law of water rights embraces both surface and ground waters, the way will be clear for establishing integrated management of surface and ground water supplies, although much additional research is still needed on the physical relationship between these two realms.

Colorado is in the unique position of providing a high percentage of the total flow of four major rivers to other states. In order to protect its interest in those waters, the state has been involved in several interstate cases, and has had a part in the negotiation of eight interstate compacts. At present, only the Colorado River may be considered as being not fully appropriated.
CONCLUSIONS

The nature of the water resource, and the relationship of man to his environment, have necessitated a body of laws which govern man's right to the use of water supplies. This concept, as contrasted with the principle of complete ownership of the water supply, has come down through the ages to affect the philosophy of water rights in the United States.

Out of this basic concept, two doctrines of water rights have evolved in the United States: the riparian doctrine in which the right to the use of water is vested in the land title which borders the stream; and the appropriation doctrine in which the right to use is vested in the earliest divertor and user of the water.

Following the historical development of the law of water rights in Colorado illustrates the movement of water rights conflicts upstream, and the convergence of litigation concerning surface waters on the one hand, and ground waters on the other. This convergence is simultaneous with increasing knowledge on the physical relationship between surface and ground waters and has already led to plans for a recodification of Colorado water law.

Water is particularly important in the development and use of other natural resources, notably recreational opportunities, and irrigable lands, and also has considerable effect on the timber, mineral, and range resources. Under the
appropriation doctrine as it has developed in Colorado, maximum utilization of the water resource is well, although not perfectly provided for. An exception is the recreational opportunities which often do not constitute appropriation of water under the law due to the lack of an actual diversion. This particular point must be faced and dealt with in order to achieve optimum development and use of the state's vast water-recreation resources which are economically important and perhaps more lasting than many other uses of water.

The appropriation doctrine in Colorado has led to nearly full, integrated, and flexible development of the water resource itself. The caution which has been exercised in court decisions and in the statutes has permitted the physical growth of the state through the flexibility and optimal use of the water resource.
<table>
<thead>
<tr>
<th>Case Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affolter v. Rough &amp; Ready Ditch Co., 60 Colo 519,</td>
<td>51</td>
</tr>
<tr>
<td>154 Pac 738(1916)</td>
<td></td>
</tr>
<tr>
<td>Anderson v. Grand Valley Irr. Dist., 35 Colo 525,</td>
<td>39</td>
</tr>
<tr>
<td>85 Pac 313(1906)</td>
<td></td>
</tr>
<tr>
<td>Archuleta v. Boulder &amp; Weld Co. Ditch Co., 118 Colo 48, 192 P2d 98(1948)</td>
<td>71</td>
</tr>
<tr>
<td>Armstrong v. Larimer Co. Ditch Co., 1 Colo App 49,</td>
<td>23</td>
</tr>
<tr>
<td>27 Pac 235(1891)</td>
<td></td>
</tr>
<tr>
<td>Arnett v. Linkhart, 21 Colo 188, 40 Pac 355(1895)</td>
<td>27</td>
</tr>
<tr>
<td>Baer Bros. Land &amp; Cattle Co. v. Wilson, 38 Colo 101,</td>
<td>40</td>
</tr>
<tr>
<td>88 Pac 265(1906)</td>
<td></td>
</tr>
<tr>
<td>Beaver Brook Res. &amp; Canal Co. v. St. Vrain Res. and Fish Co., 6 Colo App 130, 40 Pac 1066(1895)</td>
<td>27</td>
</tr>
<tr>
<td>Bowen v. Shearer, 100 Colo 134, 66 P2d 534(1937)</td>
<td>64</td>
</tr>
<tr>
<td>Bowman v. Virdin, 40 Colo 247, 90 Pac 506(1907)</td>
<td>41</td>
</tr>
<tr>
<td>Broadmore Dairy &amp; Live Stock Co. v. Brookside Water &amp; Impr. Co., 24 Colo 541, 52 Pac 792(1897)</td>
<td>29</td>
</tr>
<tr>
<td>Bruening v. Dorr, 23 Colo 195, 47 Pac 290(1896)</td>
<td>28</td>
</tr>
<tr>
<td>Burkhart v. Meiberg, 37 Colo 187, 86 Pac 98(1906)</td>
<td>39</td>
</tr>
<tr>
<td>Cascade v. Empire Co., 181 Fed 1011(1910)</td>
<td>46</td>
</tr>
<tr>
<td>Chippen v. White, 28 Colo 298, 64 Pac 184(1901)</td>
<td>33</td>
</tr>
<tr>
<td>Clark v. Ashley, 34 Colo 285, 82 Pac 588(1905)</td>
<td>38</td>
</tr>
<tr>
<td>Coffin v. Left Hand Ditch Co., 6 Colo 443(1882)</td>
<td>20</td>
</tr>
<tr>
<td>Colo. Mill &amp; Elec. Co. v. Larimer &amp; Weld Irr. Co., 26 Colo 47, 56 Pac 185(1899)</td>
<td>31</td>
</tr>
<tr>
<td>28 Pac 966(1892)</td>
<td></td>
</tr>
<tr>
<td>Combs v. Agricultural Ditch Co., 17 Colo 146,</td>
<td>25</td>
</tr>
<tr>
<td>28 Pac 966(1892)</td>
<td></td>
</tr>
<tr>
<td>Combs v. Farmers' High Line Canal &amp; Res. Co., 38 Colo 420, 88 Pac 396(1907)</td>
<td>40</td>
</tr>
<tr>
<td>Comstock v. Ramsey, 55 Colo 244, 133 Pac 1107(1913)</td>
<td>49</td>
</tr>
<tr>
<td>Denver Joint Stock Land Bank v. Markham, 106 Colo 509, 107 P2d 313(1940)</td>
<td>68</td>
</tr>
<tr>
<td>Denver, Texas &amp; Fort Worth R. R. v. Dotson, 20 Colo 304, 38 Pac 322(1894)</td>
<td>27</td>
</tr>
<tr>
<td>Denver v. Brown, 56 Colo 216, 138 Pac 44(1914)</td>
<td>50</td>
</tr>
<tr>
<td>Denver v. Colorado L. &amp; L. Co., 86 Colo 191, 279 Pac 46(1929)</td>
<td>59</td>
</tr>
<tr>
<td>Case Name</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Denver v. Sheriff</td>
<td>67</td>
</tr>
<tr>
<td>Dietz v. Hartbauer</td>
<td>44</td>
</tr>
<tr>
<td>Downing v. More</td>
<td>22</td>
</tr>
<tr>
<td>Empire Water &amp; Power Co. v. Cascade Town Co.</td>
<td>49</td>
</tr>
<tr>
<td>Faden v. Hubbell</td>
<td>62</td>
</tr>
<tr>
<td>Farmers' High Line Canal &amp; Res. Co. v. Southworth</td>
<td>23</td>
</tr>
<tr>
<td>Farmers' Independent Ditch Co. v. Agricultural Ditch Co.</td>
<td>28</td>
</tr>
<tr>
<td>Federal Power Commission v. Oregon</td>
<td>73</td>
</tr>
<tr>
<td>Ft. Collins Co. v. Larimer &amp; Weld. Co.'s.</td>
<td>51</td>
</tr>
<tr>
<td>Ft. Lyon Canal Co. v. Ark. Valley Sugar Beet Etc. Co.</td>
<td>40</td>
</tr>
<tr>
<td>Fort Lyon Canal Co. v. Chew</td>
<td>37</td>
</tr>
<tr>
<td>Fox v. Ickes</td>
<td>64</td>
</tr>
<tr>
<td>Green Valley Ditch Co. v. Frantz</td>
<td>48</td>
</tr>
<tr>
<td>Green Valley Ditch Co. v. Schneider</td>
<td>47</td>
</tr>
<tr>
<td>Hammond v. Rose</td>
<td>47</td>
</tr>
<tr>
<td>Handy Ditch Co. v. Greeley &amp; Loveland Irr. Co.</td>
<td>22</td>
</tr>
<tr>
<td>Hassler v. Fountain Mutual Irr. Co.</td>
<td>60</td>
</tr>
<tr>
<td>Haver v. Matonock</td>
<td>58</td>
</tr>
<tr>
<td>Hinderlider v. La Plata River &amp; Cherry Creek Ditch Co.</td>
<td>66</td>
</tr>
<tr>
<td>Hinderlider v. La Plata River &amp; Cherry Creek Ditch Co.</td>
<td>66</td>
</tr>
<tr>
<td>Humphreys Tunnel &amp; Min. Co. v. Frank</td>
<td>43</td>
</tr>
<tr>
<td>Ickes v. Fox</td>
<td>64</td>
</tr>
<tr>
<td>In re German Ditch and Res. Co.</td>
<td>50</td>
</tr>
<tr>
<td>Ironstone Ditch Co. v. Ashenfelter</td>
<td>50</td>
</tr>
<tr>
<td>Joseph W. Bowles Reservoir Co. v. Bennet</td>
<td>61</td>
</tr>
<tr>
<td>Kansas v. Colorado</td>
<td>41</td>
</tr>
<tr>
<td>Knoth v. Barclay</td>
<td>21</td>
</tr>
<tr>
<td>Kountz v. Olson</td>
<td>63</td>
</tr>
<tr>
<td>La Jara Creamery &amp; Live Stock Assn. v. Hansen</td>
<td>39</td>
</tr>
<tr>
<td>Lamborn v. Bell</td>
<td>26</td>
</tr>
<tr>
<td>Lamson v. Vailes</td>
<td>31</td>
</tr>
<tr>
<td>Case Title</td>
<td>Volume and Page Numbers</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>La Plata River &amp; Cherry Creek Ditch Co. v. Hinderlider</td>
<td>93 Colo 128, 25 P2d 187 (1933)</td>
</tr>
<tr>
<td>Lerimer &amp; Weld Irr. Co. v. Wyatt</td>
<td>23 Colo 480, 48 Pac 528 (1897)</td>
</tr>
<tr>
<td>Las Animas Consol. Canal Co. v. Hinderlider</td>
<td>100 Colo 508, 68 P2d 564 (1937)</td>
</tr>
<tr>
<td>Leadville Mine Dev. Co. v. Anderson</td>
<td>91 Colo 536, 17 P2d 303 (1932)</td>
</tr>
<tr>
<td>Lower Latham Ditch Co. v. Louden Irr. Canal Co.</td>
<td>27 Colo 267, 60 Pac 629, 83 Am St Rep 80 (1900)</td>
</tr>
<tr>
<td>Lyond v. Longmont</td>
<td>54 Colo 112, 129 Pac 198 (1912)</td>
</tr>
<tr>
<td>Mabee v. Flattle Land Co.</td>
<td>17 Colo App 476, 68 Pac 1058 (1902)</td>
</tr>
<tr>
<td>McClellan v. Hurdle,</td>
<td>3 Colo App 430, 33 Pac 280 (1893)</td>
</tr>
<tr>
<td>Medano Ditch Co. v. Adams</td>
<td>29 Colo 317, 68 Pac 431 (1902)</td>
</tr>
<tr>
<td>Mohl v. Lamar Canal Co.</td>
<td>128 Fed 776 (1904)</td>
</tr>
<tr>
<td>Montrose Canal Co. v. Loutsenhizer Ditch Co.</td>
<td>23 Colo 233, 48 Pac 532 (1896)</td>
</tr>
<tr>
<td>Morgan Land &amp; Canal Co. v. South Platte Ditch Co.</td>
<td>18 Colo 1, 30 Pac 1032, 36 Am St Rep 259 (1892)</td>
</tr>
<tr>
<td>Nebraska v. Wyoming</td>
<td>325 US 588, 89 L. Ed. 1815, 65 S. Ct. 1332 (Colorado impled) (1945)</td>
</tr>
<tr>
<td>Nevius v. Smith</td>
<td>86 Colo 178, 279 Pac 44 (1929)</td>
</tr>
<tr>
<td>New Loveland &amp; G. Irrig. &amp; Land Co. v. Consolidated Home Supply Ditch &amp; Reservoir Co.</td>
<td>27 Colo 525, 62 Pac 366, 52 LRA 266 (1900).</td>
</tr>
<tr>
<td>North Boulder Farmers Ditch Co. v. Legget Ditch &amp; Res. Co.</td>
<td>63 Colo 522, 168 Pac 742 (1917)</td>
</tr>
<tr>
<td>Ogilvy Irr. &amp; Land Co. v. Insinger</td>
<td>19 Colo App 380, 75 Pac 598 (1904)</td>
</tr>
<tr>
<td>People ex. rel. Park Reservoir Co. v. Hinderlider</td>
<td>98 Colo 505, 57 P2d 894 (1936)</td>
</tr>
<tr>
<td>Pioneer Irrigation Co. v. Yuma Co.</td>
<td>236 Fed 790 (1916)</td>
</tr>
<tr>
<td>Ripley v. Park Center Land &amp; Water Co.</td>
<td>40 Colo 129, 90 Pac 75 (1907)</td>
</tr>
<tr>
<td>Safrenak v. Town of Limon</td>
<td>123 Colo 330, 228 P2d 975 (1951)</td>
</tr>
<tr>
<td>Saint v. Guerrerio</td>
<td>17 Colo 448, 30 Pac 335, 31 Am St Rep 320 (1892).</td>
</tr>
<tr>
<td>San Luis Valley Irr. Dist. v. Prairie Ditch &amp; Rio Grande Drainage Dist.</td>
<td>84 Colo 99, 268 Pac 533, (1928)</td>
</tr>
<tr>
<td>Schilling Rominger</td>
<td>4 Colo 100 (1878)</td>
</tr>
<tr>
<td>Sieber v. Frank</td>
<td>7 Colo 148, 2 Pac 901 (1884)</td>
</tr>
<tr>
<td>Smith Canal or Ditch Co. v. Colorado Ice &amp; Storage Co.</td>
<td>34 Colo 485, 82 Pac 940 (1905)</td>
</tr>
</tbody>
</table>
# LIST OF COMPACTS

<table>
<thead>
<tr>
<th>Compact</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkansas River Compact, 81st Cong., 1st Session, c. 155, Pub. L. 82</td>
<td>72</td>
</tr>
<tr>
<td>Colorado River Compact, House Document 605, 67th Cong., 4th Session; Colo. Laws 1925, p. 525</td>
<td>54</td>
</tr>
<tr>
<td>Costilla Creek Compact, 79th Cong., 2d Session, c. 238, Pub. L. 408; Colo Laws 1945, p. 278</td>
<td>69</td>
</tr>
<tr>
<td>La Plata River Compact, 54 Stat 796; Colo Laws 1923, p. 696</td>
<td>56</td>
</tr>
<tr>
<td>Republican River Compact, 78th Congress, c. 104, Pub. L. 60; Colo. Laws 1943, p. 362</td>
<td>68</td>
</tr>
<tr>
<td>Rio Grande River Compact, 53 Stat 785; Colo. Laws 1939, p. 489</td>
<td>66</td>
</tr>
<tr>
<td>South Platte Compact, 44 Stat 195; Colo. Laws 1925, p. 529</td>
<td>57</td>
</tr>
<tr>
<td>Upper Colorado River Basin Compact, 81st Cong., 1st Session, c. 48, Pub. Law 37; Colo. Laws 1949, p. 498</td>
<td>71</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


## INDEX

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abandonment</td>
<td>21, 31, 46, 51, 52, 63</td>
</tr>
<tr>
<td>Adjudication</td>
<td>2, 19, 41, 45</td>
</tr>
<tr>
<td>Appropriation doctrine</td>
<td>9</td>
</tr>
<tr>
<td>&quot;Colorado Doctrine&quot;</td>
<td>17</td>
</tr>
<tr>
<td>Compared with Riparian Doctrine</td>
<td>77</td>
</tr>
<tr>
<td>History of</td>
<td>10</td>
</tr>
<tr>
<td>on public domain</td>
<td>35, 41, 46</td>
</tr>
<tr>
<td>Appropriation of water, diversion</td>
<td>20</td>
</tr>
<tr>
<td>Beneficial use</td>
<td>15, 20, 25, 35, 36, 39, 40, 46, 47</td>
</tr>
<tr>
<td>Appropriative right, appurtenance to land</td>
<td>27, 29, 31, 33, 35, 68, 85</td>
</tr>
<tr>
<td>change in point of diversion</td>
<td>36, 45, 60, 62</td>
</tr>
<tr>
<td>change in point of use</td>
<td>24, 62</td>
</tr>
<tr>
<td>change of use</td>
<td>24</td>
</tr>
<tr>
<td>compacts supercede</td>
<td>55, 56, 66</td>
</tr>
<tr>
<td>completion of</td>
<td>20</td>
</tr>
<tr>
<td>conflict with riparian right</td>
<td>10, 23</td>
</tr>
<tr>
<td>conflict with U. S. Constitution</td>
<td>10, 20, 43</td>
</tr>
<tr>
<td>continuance of conditions</td>
<td>40, 45, 59, 63, 86</td>
</tr>
<tr>
<td>preference of use</td>
<td>17, 24, 29, 31, 42, 54, 63</td>
</tr>
<tr>
<td>purposes of use,</td>
<td>17, 29, 42, 48</td>
</tr>
<tr>
<td>domestic</td>
<td>15, 16, 17, 18, 19, 24, 25</td>
</tr>
<tr>
<td>irrigation</td>
<td>32, 33, 35, 39, 43, 57, 58, 84ff</td>
</tr>
<tr>
<td>manufacturing</td>
<td>17, 18, 26, 57</td>
</tr>
<tr>
<td>mining</td>
<td>17, 18, 26, 41, 82</td>
</tr>
<tr>
<td>municipal</td>
<td>29, 57, 67, 86</td>
</tr>
<tr>
<td>navigation</td>
<td>74</td>
</tr>
<tr>
<td>power</td>
<td>26, 79</td>
</tr>
<tr>
<td>propagation of fish</td>
<td>63, 83</td>
</tr>
<tr>
<td>recreation</td>
<td>18, 43, 46, 48, 82</td>
</tr>
<tr>
<td>stock watering</td>
<td>29, 84</td>
</tr>
<tr>
<td>storage rights</td>
<td>33, 60, 61, 81</td>
</tr>
<tr>
<td>transfer of</td>
<td>22, 31</td>
</tr>
<tr>
<td>Arizona</td>
<td>54, 55, 58</td>
</tr>
<tr>
<td>Arkansas River</td>
<td>69</td>
</tr>
<tr>
<td>Compact</td>
<td>72</td>
</tr>
<tr>
<td>Beneficial use (see under Appropriation of water)</td>
<td></td>
</tr>
<tr>
<td>Canal companies,</td>
<td>22</td>
</tr>
<tr>
<td>carrier, defined</td>
<td>22</td>
</tr>
<tr>
<td>mutual, defined</td>
<td>21</td>
</tr>
<tr>
<td>Case law, defined</td>
<td>4</td>
</tr>
<tr>
<td>California</td>
<td>9, 10, 11, 15, 54, 55, 59</td>
</tr>
<tr>
<td>Classification of waters</td>
<td>12</td>
</tr>
<tr>
<td>Colorado</td>
<td></td>
</tr>
<tr>
<td>Constitution</td>
<td>17</td>
</tr>
<tr>
<td>River-Big Thompson Project</td>
<td>35, 65</td>
</tr>
<tr>
<td>River Compact</td>
<td>53, 54, 58, 71</td>
</tr>
<tr>
<td>Topic</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Compacts, Interstate (see Interstate Compacts)</td>
<td></td>
</tr>
<tr>
<td>Condemnation, rights-of-way</td>
<td>16, 17, 21, 39, 42, 46, 48</td>
</tr>
<tr>
<td>Coordination of water rights,</td>
<td></td>
</tr>
<tr>
<td>direct-flow and storage</td>
<td>33, 60, 64, 80</td>
</tr>
<tr>
<td>ground and surface waters</td>
<td>27, 63, 73</td>
</tr>
<tr>
<td>interstate and intrastate (see Appropriate Right, compacts supercede)</td>
<td></td>
</tr>
<tr>
<td>Costilla Creek Compact</td>
<td>69</td>
</tr>
<tr>
<td>Denver</td>
<td>50, 59, 67</td>
</tr>
<tr>
<td>Developed waters</td>
<td>30, 41, 58, 59, 60, 61, 81</td>
</tr>
<tr>
<td>Diffused surface waters</td>
<td>12, 40, 59</td>
</tr>
<tr>
<td>Diversion</td>
<td></td>
</tr>
<tr>
<td>necessary to appropriation</td>
<td>20, 28, 43, 47, 48</td>
</tr>
<tr>
<td>out of state</td>
<td>31, 52</td>
</tr>
<tr>
<td>out of watershed</td>
<td>40, 50, 65, 67</td>
</tr>
<tr>
<td>Domestic use (see under Appropriate Right, Purposes of Use)</td>
<td></td>
</tr>
<tr>
<td>Drainage</td>
<td>27, 30, 36, 57, 58</td>
</tr>
<tr>
<td>Fish</td>
<td>18, 62, 82</td>
</tr>
<tr>
<td>Flood waters, control of</td>
<td>80</td>
</tr>
<tr>
<td>appropriation of</td>
<td>43, 80</td>
</tr>
<tr>
<td>Ground waters,</td>
<td></td>
</tr>
<tr>
<td>appropriation of</td>
<td>34, 36</td>
</tr>
<tr>
<td>classification of</td>
<td>12</td>
</tr>
<tr>
<td>conflict with surface waters</td>
<td>24</td>
</tr>
<tr>
<td>&quot;definite underground streams&quot;</td>
<td>12, 34</td>
</tr>
<tr>
<td>percolating waters</td>
<td>12, 28, 30, 34, 38, 50, 62</td>
</tr>
<tr>
<td>Interstate Compacts</td>
<td></td>
</tr>
<tr>
<td>list of</td>
<td>19, 31</td>
</tr>
<tr>
<td>necessity for</td>
<td>94</td>
</tr>
<tr>
<td>Irrigable lands</td>
<td>68, 78</td>
</tr>
<tr>
<td>Irrigation (see under Appropriate Right, Purposes of Use)</td>
<td></td>
</tr>
<tr>
<td>Kansas</td>
<td>41, 68, 69, 72</td>
</tr>
<tr>
<td>La Plata River.</td>
<td>53</td>
</tr>
<tr>
<td>Compact</td>
<td>56, 66, 72</td>
</tr>
<tr>
<td>Laramie River</td>
<td>19</td>
</tr>
<tr>
<td>Legislation, defined</td>
<td>4</td>
</tr>
<tr>
<td>Made waters (see Developed Waters)</td>
<td></td>
</tr>
<tr>
<td>Mining (see under Appropriate Right, Purposes of Use)</td>
<td></td>
</tr>
<tr>
<td>Municipal use (see under Appropriate Right, Purposes of Use)</td>
<td></td>
</tr>
<tr>
<td>Nebraska</td>
<td>56, 57, 68, 70</td>
</tr>
<tr>
<td>New Mexico</td>
<td>54, 66, 69</td>
</tr>
<tr>
<td>North Platte River</td>
<td>70</td>
</tr>
<tr>
<td>Oregon</td>
<td>73</td>
</tr>
<tr>
<td>Percolating waters (see under Ground Waters)</td>
<td></td>
</tr>
<tr>
<td>Preferential uses of water, Colorado Colorado Constitution</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>24, 29, 31</td>
</tr>
<tr>
<td>Prescriptive Rights</td>
<td>58, 64</td>
</tr>
</tbody>
</table>
Protection of water right against,
  junior appropriation ........................ 17, 40, 44, 61
  senior appropriation ........................... 37, 40, 44
  Change in place or type of use, or point of diversion
    (see under Appropriate Right)
Public domain, ........................................... 9
  Laws concerning,
    1866, 1870, and 1877 ...................... 18, 19, 22, 73
    1902 ............................................ 34, 35, 48
Purposes of use(see under Appropriate Right)
Range(see under Appropriate Right, Purposes of Use)
Recreation(see under Appropriate Right, Purposes of Use)
Republican River Compact .................................... 68
Return flow ........................................... 30, 34, 38, 42, 47, 48, 58, 59, 79, 80
Rio Grande River Compact .......................... 66
Riparian Doctrine,
  history of ........................................ 8
  compared with appropriation doctrine ........ 77
  in Kansas ........................................ 42
Rotation(see La Plata River Compact references)
Seepage waters .................................... 36, 48, 50
Sewage waters ........................................ 36
South Platte River Compact .......................... 35
Spring waters ........................................ 12, 23, 28, 38, 50, 51, 58
Storage rights(see under Appropriate Right)
Tributary waters .................................... 24, 27, 28, 30, 34, 36, 48, 50, 73
United States,
  conflict with states over water rights ....... 36, 70, 73
Upper Colorado River Basin Compact ............... 71
Upper Colorado River Storage Project ............ 72
Waste waters ........................................ 12, 36, 47, 50
Water right, nature of ................................ 5
Wyoming ............................................ 44, 53, 54, 68, 70
Dennison Dam -  

1) Upstream non-navigable water control where 
   navigability downstream is influenced

2) Multipurpose aspects