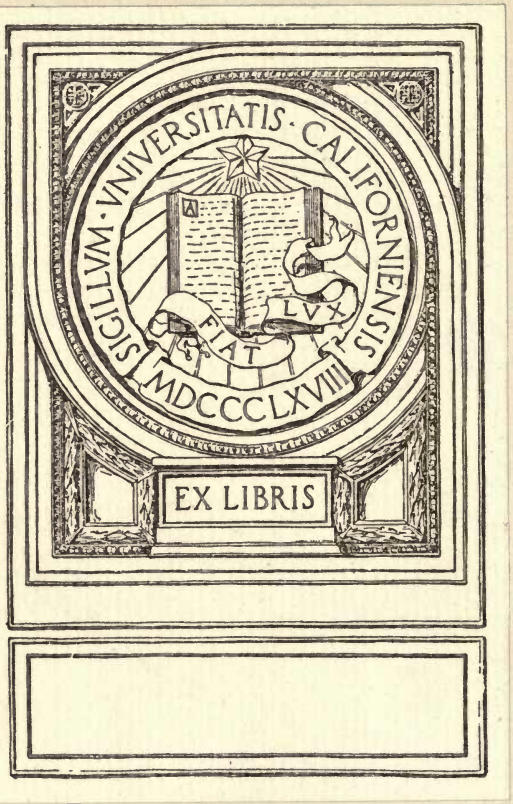
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ELEMENTS

OF

WESTERN WATER LAW

(REVISED)

BY

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PREFACE TO THE SECOND EDITION

Over five years have elapsed since the text of the first edition was prepared as separate articles for the Journal of Electricity. During that period, the movement for legislation providing a rational control of water rights has notably advanced, and the courts of last resort, in many cases dealing with water rights, have either established new principles or strengthened the old. In this edition, an attempt has been made to revise the text so that the changes due to new legislation and judicial opinions may be duly emphasized.

The idea of the lectures, as originally given to engineering and agricultural students in the University of California, was to so present the "elements" as to acquaint the students with the work and problems found in a state engineer's office, in dealing with the appropriation of water for irrigation and other useful purposes. The aim of this revision is to serve the same purpose by bringing the text to date.

The writer wishes to express his appreciation of the very material assistance given him by Professor Sydney T. Harding, of the University of California, in preparing the revision for publication.

San Francisco, January 15, 1918.

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ELEMENTS OF WESTERN WATER LAW

CHAPTER I

EARLY DEVELOPMENT OF THE DOCTRINE OF APPROPRIATION

The doctrine of appropriation is one recognized in the law of waters as governing a class of rights markedly distinct from the riparian rights of the common law. It grew out of the occupancy of the public domain during the mining period and is not accepted outside of the western mining and irrigation states. Although of so recent origin as far as our own people are concerned, the following quotation from Clough v. Wing (2 Ariz. 371) shows its long standing in America:

> And the right to appropriate and use water for irrigation has been recognized longer than history, and since earlier times than tradition. Evidences of it are to be found all over Arizona and New Mexico in the ancient canals of a prehistoric people, who once composed a dense and highly civilized population. These canals are now plainly marked, and some modern canals follow the track and use the work of this forgotten people. The native tribes, the Pimas and Papagos and other pueblo Indians, now, as they for generations have done, appropriate and use the waters of these streams in husbandry, and sacredly recognize the rights acquired by long use, and no right of a riparian owner is thought of. The only right in water is found in the right to conduct the same through their canals to their fields, there to use the same in irrigation. The same was found to prevail in Mexico among the Aztecs, the Toltecs, the Vaquis, and other tribes at the time of the conquest, and remained undisturbed in the jurisprudence of that country until now. Clough v. Wing, 17 Pac. 453.

As was to be expected from the great rush to the gold fields following the discovery in January, 1848, legal controversies early arose not only in regard to the mining claims but also in regard to the ditches and water rights used in connection therewith. One of the very early cases often

quoted is Irwin v. Phillips (5 Cal. 140), decided in 1855, and the following extract from the opinion clearly shows the necessity for the doctrine of prior appropriation:

> Courts are bound to take notice of the political and social conditions of the country which they judicially rule. In this state the larger part of the territory consists of mineral lands, nearly the whole of which are the property of the public. No right or intent of disposition of these lands has been shown either by the United States or the state governments, and with the exception of certain state regulations, very limited in their character, a system has been permitted to grow up by the voluntary . . . action and assent of the population, whose free and unrestrained . . . occupation of the mineral region, has been tacitly assented to by the one government, and heartily encouraged by the expressed legislative policy of the other. 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. Among these the most important are the rights of miners to be protected in the possession of their selected localities, and the rights of those who, by prior appropriation, have taken the waters from their natural beds, and by costly artificial works have conducted them for miles over mountains and ravines, to supply the necessities of gold diggers, and without which the most important interests of the mineral region would remain without development. So fully recognized have become those rights, that, without any specific legislation conferring or confirming them, they are alluded to and spoken of in various acts of the legislature in the same manner as if they were rights which had been vested by the most distinct expression of the will of the lawmakers. . . . This simply goes to prove what is the purpose of the argument, that however much the policy of the state, as indicated by her legislation, has conferred the privilege to work the mines, it has equally conferred the right to divert the streams from their natural channels, and as these two rights stand upon an equal footing, when they conflict, they must be decided by the fact of priority, upon the maxim of equity, "Qui prior est in tempore, potior est in jure."

Elsewhere in the above mentioned opinion it is stated:

> It must be premised that it is admitted on all sides that the mining claims in controversy, and the lands through which the stream runs and through which the canal passes, are a part of the public domain, to which there is no claim of private proprietorship.

The miners and others were but trespassers on the public domain as Congress had passed no legislation recognizing their claims. It is not surprising that a movement gained weight in the eastern states to have the government assert its ownership to the mines and ditches and other developed works on the public lands. As far as the West is concerned, therefore, the then critical situation was happily relieved by the

passage of the famous Act of 1866, which is now Section 2339 of the Revised Statutes of the United States, and reads as follows:

Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws and decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes herein specified is acknowledged and confirmed; but whenever any person, in the construction of any ditch or canal, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

In 1870 the section which is now Section 2340 of the Revised Statutes, and which is generally construed with Section 2339, was passed. It is as follows:

All patents granted, or pre-emption or homesteads allowed, shall be subject to any vested and accrued water-rights, or rights to ditches and reservoirs used in connection with such water-rights as may have been acquired under or recognized by the preceding section.

It is to be noted that by the two sections above quoted not only were the water rights which had vested and accrued recognized, but also the rights of way for ditches and reservoirs in connection therewith.

The first noteworthy judicial construction of the Act of 1866 was by the Supreme Court of Nevada in the case of Van Sickle v. Haines (7 Nev. 249) decided in January, 1872. Both parties were the owners in fee of their respective lands. Haines' patent was dated December 28, 1864, and long prior thereto Van Sickle had diverted part of the waters of Daggett Creek, which diversion was interfered with by Haines in December, 1867, under the claim of riparian ownership. The lower court rendered judgment in favor of Van Sickle on the grounds of prior appropriation, but the Supreme Court held that such rights of appropriation were inferior to the riparian rights of Haines and reversed the decision. In reference to the Act of 1866, the Supreme Court said:

The Act of Congress of July, 1866, if it shows anything, shows that no diversion had previously been authorized, for if it had whence the necessity of passing the Act, which appears simply to have been adopted to protect those who at that time were diverting water from its natural channel?

Doubtless, all patents issued, or titles acquired from the United States, since July, 1866, are obtained subject to the rights existing at that time, but this is a different case, for if the appellant has any right to the water, he acquired it by the patent issued to him two

years before that time, and with which, therefore, Congress could not interfere.

On May 28, 1872, the Federal Circuit Court for Nevada decided the case of Union Mill & Mining Co. v. Ferris (2 Saw. 176). The mill company, as a riparian owner, brought the action to enjoin Ferris and other farmers in the Upper Carson Valley from diverting the waters of Carson River. Regarding the Act of 1866 the court said:

For seventeen years prior to 1866, the mineral land of California and Nevada had been occupied by the citizens of the United States, without objection on the part of the government. Canals and ditches were dug at this time, often at great expense, over the public lands, and the water of the streams diverted by these means for mining and other purposes. Local customs grew up in the mining districts, by common consent, and by rules adopted at miners' meetings for governing the location, recording and working of mining claims in the particular mining district. Possessory rights to public lands, mining claims and water were regulated by state statutes, and enforced by the state courts. . . . .

But the Act is prospective in its operation, and cannot be construed so as to divert a part of an estate granted before its passage. If it be admitted that Congress has the power to divest a vested right by giving a statute a retrospective operation, that interpretation will never be adopted without absolute necessity.

To appreciate the seriousness of the two Nevada decisions above mentioned, it must be remembered that, by the construction therein given, one who received patent prior to July, 1866, for riparian land could enjoin diversions above him to non-riparian lands no matter how long such diversions had existed, and also that any one who secured patent prior to July, 1866, to land crossed by a ditch became the owner of such ditch, or at least could stop its operation.

Fortunately for the early investors, the Supreme Court of the United States did not adopt the Nevada Court's view, as is clearly shown in the case of Broder v. Natoma Water & Mining Company (101 U. S. 274) decided in October, 1879. The water company had constructed a ditch at an expense of about $200,000 in 1853 on lands then public. Part of the land crossed was within the Central Pacific Railroad grant under the Act of 1864, and Broder became the owner thereof and brought the action to have the canal declared a nuisance and to recover $12,000 damages on account of its maintenance on the land. In construing the provisions of the Act of 1866 in its bearing upon the case, the Court said:

In reference to his lands held under conveyance from the railroad company, it might be a question of some difficulty whether the right was so far vested in that company before the passage of this Act of

1866, that the latter would be ineffectual as regards these lands. But we do not think that the defendant is under the necessity of relying on that statute.

It is the established doctrine of this court that rights of miners, who had taken possession of mines and worked and developed them, and the rights of persons who had constructed canals and ditches to be used in mining operations and for purposes of agricultural irrigation, in the region where such artificial use of the water was an absolute necessity, are rights which the government had, by its conduct, recognized and encouraged and was bound to protect, before the passage of the Act of 1866. We are of opinion that the section of the Act which we have quoted was rather a voluntary recognition of a pre-existing right of possession, constituting a valid claim to its continued use, than the establishment of a new one. This subject has so recently received our attention, and the grounds on which this construction rests are so well set forth in the following cases, that they will be relied on without further argument.

The Broder v. Natoma Water Company decision has continued to be the accepted construction of the Act of 1866, and what uncertainty may have arisen from the Nevada decisions was thus removed.

As the first appropriations on the public domain were by the miners, it became the custom to initiate water rights by posting notices similar to those used for the mineral claims. The fact that the notice in the case of the water claim could hardly be seen except by accident, and was therefore not like the mining notice which could be seen by all prospectors passing the mineral claim, did not appeal to the early miners. The water claims posted in accordance with custom were recorded in the county records long prior to any legislation authorizing or requiring such recordation.

Reference has been made to Irwin v. Phillips and the rule of prior appropriation. In the following year, 1856, the case of Conger v. Weaver (6 Cal. 548) was decided and established, as between claimants on government land, the doctrine of relation in regard to appropriations in the following words:

But, from the nature of these works, it is evident that it requires time to complete them, and from their extent, in some instances, it would require much time; and the question now arises, at what point of time does the right commence, so as to protect the undertaker from the subsequent settlements or enterprises of other persons. If it does not commence until the canal is completed, then the license is valueless, for after nearly the whole work has been done, any one, actuated by malice or self-interest, may prevent its accomplishment; any small squatter settlement might effectively destroy it.

But I apprehend that, in granting the license which we have presumed for the purpose before us, the state did not intend that it should be turned into so vain a thing, but designed that it should be effectual

for the object in view; and it consequently follows that the same rule must be applied here to protect this right as in any other.

So, in the case of constructing canals, under the license from the state, the survey of the ground, planting stakes along the line, and actually commencing and diligently pursuing the work, is as much possession as the nature of the subject will admit, and forms a series of acts of ownership which must be conclusive of the right.

In an earlier case, Eddy v. Simpson (3 Cal. 252) decided in 1853, it was said:

It is laid down by our law writers, that the right of property in water is usufructuary, and consists not so much of the fluid itself as the advantage of its use. . . . The right is not in the corpus of the water, and only continues with its possession.

The above decisions are but illustrations of many by the California Supreme Court in the fifties which established the general principles of the law of prior appropriation. As new cases arose the principles were enlarged upon and strengthened, so that when the California legislature did finally act upon this subject in 1872, the sections adopted were but declaratory of existing law. The sections then enacted became sections 1410 to 1422 of the Civil Code and, with minor amendments, governed the appropriation of water in California until December 19, 1914, when the Water Commission Act became effective. Appropriations of water for power purposes were, however, previously governed by a statute effective April 8, 1911. Although the sections are not now in force in California, they are quoted here as they were the first general statutes providing for the appropriation of water in the western states, and served as a model for the first legislation along this line in the other western states.

Sections 1410 to 1422 of the Civil Code of California, as adopted in 1872, are as follows:

Sec. 1410. The right to the use of running water flowing in a river or stream or down a canyon or ravine may be acquired by appropriation.

Sec. 1411. The appropriation must be for some useful or beneficial purpose, and when the appropriator or his successor in interest ceases to use it for such a purpose, the right ceases.

Sec. 1412. The person entitled to the use may change the place of diversion, if others are not injured by such change, and may extend the ditch, flume, pipe, or aqueduct by which the diversion is made to places beyond that where the first use was made.

Sec. 1413. The water appropriated may be turned into the channel of another stream and mingled with its water, and then reclaimed; but in reclaiming it the water already appropriated by another must not be diminished.

Sec. 1414. As between appropriators, the one first in time is the first in right.

Sec. 1415. A person desiring to appropriate water must post a notice, in writing, in a conspicuous place at the point of intended diversion, stating therein:

1. That he claims the water there flowing to the extent of (giving the number) inches, measured under a four-inch pressure;

2. The purposes for which he claims it, and the place of intended use;

3. The means by which he intends to divert it, and the size of the flume, ditch, pipe, or aqueduct in which he intends to divert it.

A copy of the notice must, within ten days after it is posted, be recorded in the office of the recorder of the county in which it is posted.

Sec. 1416. Within sixty days after the notice is posted, the claimant must commence the excavation or construction of the works in which he intends to divert the water, and must prosecute the work diligently and uninterruptedly to completion, unless temporarily interrupted by snow or rain.

Sec. 1417. By "completion" is meant conducting the waters to the place of intended use.

Sec. 1418. By a compliance with the above rules the claimant's right to the use of the water relates back to the time the notice was posted.

Sec. 1419. A failure to comply with such rules deprives the claimants of the right to the use of the water as against a subsequent claimant who complies therewith.

Sec. 1420. Persons who have heretofore claimed the right to water, and who have not constructed works in which to divert it, and who have not diverted nor applied it to some useful purpose, must, after this title takes effect, and within twenty days thereafter, proceed as in this title provided, or their right ceases.

Sec. 1421. The recorder of each county must keep a book, in which he must record the notices provided for in this title.

Sec. 1422. The rights of riparian proprietors are not affected by the provisions of this title.

As stated above, under the doctrine of relation laid down in Conger v. Weaver, the right to appropriate water, after the completion of the diversion works with reasonable diligence, dated back to the first steps taken in regard thereto. The statute, in Section 1418, fixed this first step as the posting of the notice (Section 1415). It is well settled (Wells v. Mantes, 99 Cal. 583, and a number of later cases) that it was not necessary to follow the statute in order to make a valid appropriation, but by failure to follow the statute the benefit of the doctrine of relation was lost and the right dated back to the completion of the work only. There was therefore nothing to be gained and much to be lost by not following the statute.

As is shown by Sections 1415 and 1416, there was no public officer in California concerned in the form or contents of the notice of appropriation and the consequent construction

work. The county records abound in notices under which no construction or survey work was ever done. Such notices are not worthy of the slightest consideration and are in no way "clouds upon the title," as is often claimed. Unless the construction work was begun and continued with reasonable diligence to completion, as provided in the statute, no right accrued.

In regard to the statements required by the three subdivisions of Section 1415, practically any notice, regardless of form, giving the number of inches claimed, the purposes, place of use, means of diversion and size of conduit, was sufficient. In the records are found examples of empty generalities as well as some of refined details. As an illustration of how little had to be stated, to be accepted as sufficient by the Supreme Court, the following notice from the case of De Wolfskill v. Smith (5 Cal. App. 175) is quoted:

Notice of Appropriation of Water. Take notice that the undersigned claims fifteen hundred inches of water measured under a four-inch pressure flowing from and at the wells bored by the San Jacinto Oil Company on the land which would be the northwest quarter of section four, township three south, range two west, San Bernardino meridian, if said land were surveyed by the United States, and I intend to divert said water at the three several points where this notice is posted, to-wit, at each of said wells bored by the San Jacinto Oil Company.

I intend to use said water for domestic and irrigation purposes on the land which was known as the Rancho San Jacinto Nuevo and the Lorena, Lakeview and Alesandro Colonies and adjoining lands in the county of Riverside, state of California.

I intend to divert said water by means of ditches of sufficient capacity to carry same, leading from each of said points.

Dated the thirteenth day of October, 1902.

ELENA P. deWOLFSKILL.

Witness: DAVID G. deWOLFSKILL.

CHAPTER II

RIPARIAN RIGHTS IN THE WESTERN STATES

According to the common law doctrine of riparian rights in the law of waters, each owner along a stream is entitled to have the waters thereof flow in the natural channel, unpolluted in quality and undiminished in quantity. A strict interpretation of the doctrine would therefore forbid any use whatsoever of the waters of the stream. It was early modified in England so that two uses are recognized—ordinary or natural, including the use for domestic and stock purposes; and extraordinary or artificial, including the use for irrigation along the banks and also for mechanical purposes. For "ordinary" uses the upper riparian owner is allowed to take the entire stream if necessary; but for "extraordinary" uses he is entitled to water only when such use will not interfere with a like use by other riparian owners—that is, he must share the stream with others along its banks.

As shown in the previous chapter, a different doctrine—that of appropriation—grew up during the early occupancy by the miners of the public domain in the western states. It was also shown that the early California cases establishing the new doctrine were between parties not holding title to any land along the streams; and that the Supreme Court of Nevada in Van Sickle v. Haines (7 Nev. 149) and the Federal Circuit Court for Nevada in Union Mill & Mining Co. v. Ferris (2 Saw. 176) in 1872 held that in cases where title to riparian land had passed from the government, the new doctrine must give way to the older and long recognized (in England and the eastern states) doctrine of riparian rights.

The basis of the argument for the rule laid down in the two Nevada cases was a statutory provision making the common law of England the rule of decision in all the Nevada courts. It is important to note the following words of Mr. Chief Justice Lewis (in Van Sickle v. Haines) regard-

the two doctrines, as they show an erroneous view of the doctrine of appropriation which, unfortunately, has been shared by the courts in many western states:

> It (the common law) is a rule which gives the greatest right to the greatest number, authorizing each to make a reasonable use of it, providing he does no injury to the others equally entitled to it with himself; whilst the rule of prior appropriation here advocated would authorize the first person who might choose to make use of or divert a stream, to use or even waste the whole to the utter ruin of others who might wish it.

In marked contrast to the attitude of the Nevada courts in the early cases is that of the Colorado courts. In Coffin v. Left Hand Ditch Co., 6 Colo. 443, decided in 1882, the issue between riparian owners and appropriators was before the court for the first time. Coffin and others were riparian owners along the St. Vrain River, who, in the dry season of 1879, interfered with the ditch of the Ditch Company, which diverted the St. Vrain waters to another watershed. The company being a prior appropriator, Coffin relied upon his riparian right. The opinion is full of strong expressions showing the need of appropriation in an arid section, but a few concluding sentences only are given here:

> 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. And we hold that, in the absence of express statutes to the contrary, the first appropriator of water from a natural stream for a beneficial purpose has, with the qualifications contained in the constitution, a prior right thereto to the extent of such appropriation.

In the late seventies the case of Jones v. Adams, (19 Nev. 78), arose out of the conflict over the waters of Sierra Creek, which, like Daggett Creek of the Van Sickle case, is a small mountain stream on the west side of Carson Valley in Nevada. It was decided by the Supreme Court of Nevada in 1885, and the Van Sickle case was overruled on the ground that the doctrines of the common law were inapplicable "to the wants and necessities of the people, whether engaged in mining, agricultural or other pursuits". The doctrine of riparian rights was thus excluded from the law of waters in Nevada and has so remained.

The year following the decision in Jones v. Adams, the Supreme Court of California decided the celebrated case of Lux v. Haggin (69 Cal. 255). The extreme length of the opinion (two hundred pages—probably the longest in the

California reports) is sufficient evidence of its importance and the interest in the issue involved. Lux and others sought to stop Haggin from diverting the waters of Kern River which would naturally flow down Buena Vista Slough, to which their lands were riparian. As in the Van Sickle case, the court had a wrong impression of appropriation and said, "It does not require a prophetic vision to anticipate that the adoption of the rule, so called, of 'appropriation' would result in a monopoly of all the waters of the state by comparatively few individuals. . . ."

The riparian doctrine as modified in Lux v. Haggin is commonly called the California rule. Its principles, so often quoted, are best given in the words of the Court:

> By the common law the right of the riparian proprietor to the flow of the stream is inseparably annexed to the soil, and passes with it, not as an easement or appurtenance, but as part and parcel of it. Use does not create the right, and disuse cannot destroy or suspend it. The right in each extends to the natural and usual flow of all the water, unless where the quantity has been diminished as a consequence of the reasonable application of it by other riparian owners for purposes hereafter to be mentioned.
>
> By our law the riparian proprietors are entitled to a reasonable use of the waters of the stream for the purpose of irrigation. What is such reasonable use is a question of fact, and depends upon the circumstances appearing in each particular case. . . .

Lux v. Haggin was decided by a divided court of four to three. It has not only fastened the rule of riparian rights upon California, seemingly for all time, but has been the main reliance of the other western states following the California rule. The following extract from the dissenting opinion of Mr. Justice Ross shows how decided was the difference of opinion among the Justices:

> The common-law doctrine of riparian rights being wholly inconsistent with and antagonistic to that of appropriation, it necessarily follows that when the federal and state governments assented to, recognized, and confirmed, with respect to the waters upon the public lands, the doctrine of appropriation, they in effect declared that that of riparian rights did not apply. The doctrine of appropriation thus established was not a temporary thing, to exist only until some one should obtain a certificate or patent for forty acres or some other subdivision of the public land bordering on the river or other stream of water. It was, as has been said, born of the necessities of the country and its people, was the growth of years, permanent in its character, and fixed the status of water rights with respect to public lands.

The California rule has been adopted in California, Kansas, Montana (still doubtful), Nebraska, North Dakota, Okla-

homa, Oregon, South Dakota, Texas and Washington. Parts of each of the states named are so humid that irrigation is not only not necessary, but there is a demand for drainage. In the remainder of the irrigation states—Arizona, Colorado, Idaho, Nevada, New Mexico, Utah and Wyoming—the doctrine of riparian rights has been abrogated and the so-called Colorado rule followed; that is, the doctrine of appropriation exclusively. It may assist one to remember the above classification by noting that the semi-arid or "border" states (that is, bordering the irrigation zone) follow the California rule, and that the strictly arid or "interior" states (that is, well within the irrigation zone) follow the Colorado rule.

One often hears the remark that there is now no real conflict between the doctrines in California, and it many times comes from a supposedly reliable source. Even the Supreme Court of Nevada in Twaddle v. Winters (29 Nev. 88) decided in 1906, in speaking of the passing of the doctrine of riparian rights, quoted with approval the testimony of a California Congressman in the case of Kansas v. Colorado, in which he said "that there had been a departure from the principles laid down in Lux v. Haggin, because at that time the value of water was not realized; that the decision had been practically reversed by the same court on subsequent occasions, and that the doctrine of prior appropriation and the application of water to a beneficial use is in effect in force now in that state."

The above statement is entirely misleading, as the California Supreme Court has not only not departed from its position in Lux v. Haggin, but has handed down opinions which almost nullify the doctrine of appropriation under certain physical conditions.

While the Nevada Supreme Court was writing its opinion in Twaddle v. Winters the case of Miller & Lux v. Madera Canal Co. (155 Cal. 59) was before the California Supreme Court. It was finally decided in January, 1909. Miller & Lux, as riparian owner along the lower Fresno River, sought to enjoin the Madera Canal Company from diverting the flood waters thereof for storage in reservoirs. The Fresno River drains only the lower mountain area and is, therefore, dry early in the summer. The canal company is the owner of a system of ditches for the lands in the vicinity of Madera, and intended to make use of certain natural depressions as reservoirs so that the flood waters of May and early June might be stored for use later in the season. The river banks through the Miller & Lux property are so low that the floods annually

overflow them and deposit "on such lands large quantities of fertilizing and enriching materials, increasing their productiveness and enhancing their value."

The canal company argued that it intended to divert and store only the flood waters which could not be considered part of the natural flow to which the riparian owners were entitled, and that the use, if such it could be called, of the flood waters by Miller & Lux was too wasteful and unreasonable to be tolerated. The Court refused to accept this argument in the following language:

> What the riparian proprietor is entitled to as against non-riparian takers is the ordinary and usual flow of the stream. There is no good reason for saying that the greatly increased flow following the annually recurring fall of rain and melting of snow in the region about the head of the stream is any less usual or ordinary than the much diminished flow which comes after the rains and the melted snows have run off.
>
> The doctrine that a riparian owner is limited to a reasonable use of the water applies only as between different riparian proprietors. As against an appropriator who seeks to divert water to non-riparian lands, the riparian owner is entitled to restrain any diversion which will deprive him of the customary flow of water which is or may be beneficial to his land. He is not limited by any measure of reasonableness.

A case even more bewildering to appropriators, if possible, was that of Miller v. Bay Cities Water Company (157 Cal. 256), decided one year later—February, 1910. Miller was the owner of a small orchard in the Santa Clara Valley and had for years irrigated it by pumping from a well. The water company intended to construct a dam to bed rock across the "lower gorge" of the Coyote River and thus impound the flood waters of the stream for diversion to San Francisco or other bay cities. Below the lower gorge the river flows through Santa Clara Valley to San Francisco Bay, so that no lower storage is possible. Miller claimed that the dam would prevent the underground waters from reaching the water bearing stratum tapped by his well and sought an injunction.

The Supreme Court sustained the finding of the lower court that the water bearing stratum below Miller's land has its "intake" in the vast bed of gravel in the lower gorge and is supplied by the surface and subsurface waters of the Coyote River flowing through said gorge. It accordingly affirmed the decree perpetually enjoining the water company "from arresting or obstructing at or above the lower gorge (excepting for the reasonable use thereof on the lands of said corporation in the exercise of its riparian rights) any of the

water of the Coyote River which, excepting for said arresting or diverting, would flow on the surface of the bed of said river through said gorge, or would flow or percolate through said gorge underneath the surface thereof".

In a later chapter it will be shown that the owners of land overlying a water bearing stratum are treated in California as riparian owners, so the Supreme Court held that the water company was properly restrained from diverting to non-riparian lands the water which would flow through the stratum tapped by Miller's well. The water company insisted "that if the plaintiff has a right to enjoin the diversion of the waters of the stream which would otherwise percolate to and supply the artesian stratum underlying his land, the court was not warranted in enjoining the appellants from diverting the flood waters of the Coyote River, which it was claimed were wasted and lost in the bay of San Francisco.

Regarding this argument the Supreme Court said:

All these waters are necessary, of themselves or by their force, to supply underground waters, which they, even now, fail to do to the full capacity of the underlying strata, to which full capacity the plaintiff and others interested in them are entitled. . . . We are not prepared to say that, even in their flow after passing the gravels in which the intake to these artesian strata lie, they serve no other useful purpose, but certainly these storm waters do not become waste until they have flowed over these gravel beds and are on their way to the bay. It is only there that it may be said that they can perform no further useful service, the only place where they first become waste waters, and where, without apparently invading the rights of anyone they may be diverted. No reasonable objection could be made to the diversion of the waters there because they are then, for all practical purposes, waste waters.

The above ruling seems to establish so wasteful a policy that Mr. Justice Shaw wrote a concurring opinion and clearly presented the dire need of storage of our flood waters, showing the accomplishment of the triple purpose of lessening damage by overflow, affording irrigation water during the dry season and, through return waters from increased irrigation, bettering navigation during the low water period. He held, however, that the conditions in the Santa Clara Valley are not paralleled elsewhere in the state, except it may be in the San Fernando valley, and call for the rule laid down; that the floods when waste occurs are infrequent and such waste small and practically indeterminable; that the storage at chance intervals of such small quantities, subject to heavy evaporation losses, would be of little value; and that granting permission to store such waste while conferring no

substantial benefit upon the water company would lessen the value of the valley property overlying the water bearing stratum.

The two cases above discussed are of particular interest as the era of reservoir building in the states recognizing the riparian doctrine is just beginning. The point to be remembered is that each case dealt with such conditions that the court believed actual damage would be done if storage was allowed. This is emphasized in the case of Miller & Lux v. Fresno Flume and Irrigation Co. (158 Cal. 626), decided November 22, 1910, wherein the plaintiff sought to have enjoined the maintenance of defendant's dam and its alleged interference with the natural flow of Stevenson's Creek, a tributary of the San Joaquin River.

The plaintiffs quoted many California cases "as establishing the proposition that the riparian owner is entitled to the unobstructed flow of a stream at all times, including flood waters . . . . and that, without regard to damage, it is the right of every riparian proprietor to have the water come to his land through its natural channel, undiminished in quantity and unimpaired in quality, save to the extent that results from reasonable use of the water by other riparian owners upon the stream."

In answer to this argument the court said:

But the cases do not support the position which appellants take. Even if at common law or under the civil law it was a part of the usufructuary right of the riparian owner to have the water flow by for no purpose other than to afford him pleasure in its prospect, such is not the rule of decision in this state. . . .

It will be found, therefore, that the decisions of this state not only do not deny the right to the use of storm and flood waters, but encourage the impounding and distribution of those waters wherever it may be done without substantial damage to the existing rights of owners.

The court also said:

In Miller v. Bay Cities Water Co., 157 Cal. 256 (107 Pac. 115), the principle is clearly recognized and declared that an appropriator of water may divert for use to any point beyond the watershed any portion of the waters of the stream which serves no useful purpose either to the riparian owners, or in supplying the underground stratum, or such waters as are in excess of the quantity necessary for such purposes.

And later in quoting from Miller & Lux v. Madera Canal Company, said:

That our cases 'decide that an injunction restraining the diversion of storm or flood waters will not be granted at the instance of

a riparian owner, when it appears that he will not be injured in any way by such diversion.'

The Court finally concluded that if the doctrine laid down in the earlier cases confers such rights upon riparian owners as claimed by plaintiffs, then such earlier cases may be considered modified by the later decisions. The Fresno Flume storage was again before the California Supreme Court in San Joaquin and Kings R. C. & I. Co. v. Fresno Flume and Irrigation Co. (169 Cal. 174), decided January 28, 1915, and it is therein held that the former decision (158 Cal. 626) gave the Flume Co. the right to store the flood waters only and not to take waters which would decrease the natural flow.

So far as the natural flow is concerned, the California Supreme Court has repeatedly held that the diversion of water of the stream is an injury to the freehold of the riparian owner and may be enjoined without a showing of other immediate monetary damages (Shurtleff v. Kehrer, 163 Cal. 24).

The most recent noteworthy California flood water decision is Gallatin v. Corning Irrigation Co. (163 Cal. 405), decided August 5, 1912. After commenting upon a number of decisions dealing directly with the question of riparian rights in flood waters, the Court says:

These decisions in effect establish the just rule that flood waters which are of no substantial benefit to the riparian owner or to his land, and are not used by him, may be taken at will by any person who can lawfully gain access to the stream, and conducted to lands not riparian, and even beyond the watershed, without the consent of the riparian owner and without compensation to him. They are not a part of the flow of the stream which constitutes a "parcel" of his land, within the meaning of the law of riparian rights.

In Oregon and Washington the courts have followed California in the flood water and storage cases. (Eastern Oregon Land Co. v. Willow River Land and Irrigation Co., 201 Fed. 203; Still v. Palouse Irrigation and Power Co., 117 Pac. 466; Longmire v. Yakima Highlands Irr. & Land Co., 163 Pac. 782). In the cases cited, storage was enjoined as the court held that substantial damage would result to complaining lower riparian owners.

The conclusion that must be drawn from the above is that lower riparian owners may not only enjoin the diversion of the natural flow but may also enjoin the storage of even the flood waters if such storage will result in damage, either present or prospective. It is therefore of vital interest to know the limits of riparian lands and the general limitations which other states have placed upon the riparian doctrine.

Statutory Limitation of Riparian Rights

The modified rule of riparian rights has been followed by California, Kansas, Montana (still doubtful), Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Texas and Washington; and has been rejected by Arizona, Colorado, Idaho, Nevada, New Mexico, Utah and Wyoming. Its rejection by the above states was not due to constitutional or statutory provisions, but to the fact that the doctrine was entirely unsuited to the physical conditions existing in an arid region, as shown by the quotations from Jones v. Adams and Coffin v. Left Hand Ditch Co. Similar language was used by the courts of the other arid states abrogating the doctrine.

The only Supreme Court holding that the doctrine has been modified by state statute is that of Nebraska. In Crawford v. Hathaway (67 Neb. 325) decided February 4, 1903, it is held:

> The irrigation act of 1889 abrogated in this state the common law rule of riparian ownership in water, and substituted in lieu thereof the doctrine of prior appropriation. This legislation could not and did not have the effect of abolishing riparian rights which had already accrued, but only of preventing the acquisition of such rights in the future.

The Nebraska irrigation act of March 19, 1889, above referred to, was similar to the California statute of 1872 providing for the appropriation of water. This statute was considered at length in Lux v. Haggin—the latter party contending "that the Civil Code gives . . . . a right to the water superior to that of the riparian proprietor below." Section 1422 of the Civil Code then contained the following words: "The rights of riparian proprietors are not affected by the provisions of this title." The Court held that:

> Section 1422 of the Civil Code is protective, not only of riparian rights existing when the Code was adopted, but also of the riparian rights of those who acquired a title to land from the State, after the adoption of the Code and before an appropriation of water in accordance with the Code provisions.
>
> Neither a grantee of the United States nor the grantee of a private person, who was a riparian owner when the Code was adopted, need rely for protection on Section 1422. Such persons are protected by constitutional principles.

At the first California legislative session (1887) after the decision of Lux v. Haggin, section 1422 was repealed with the proviso "that the repeal of this section shall not in any way interfere with any right already vested." This repeal opened the way for a new attack upon the riparian doctrine

but no serious attempt has been made. If the California Supreme Court could be induced to accept the ruling of the Nebraska Supreme Court in Crawford v. Hathaway, the riparian right would be considered abrogated for all public land not entered in 1887.

The Congressional Desert Land Act of March 3, 1877, contains the following language in one of its provisos:

> **And all surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers and other sources of water supply upon the public lands and not 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. . . .**

This language was construed by the Supreme Court of Oregon in Hough v. Porter (51 Ore. 318) decided January 5, 1909, as follows:

> **Construed, then, with the act of 1866 and other provisions of the act of 1877, we are of the opinion that all lands settled upon after the date of the latter act were accepted with the implied understanding that (except as to water for domestic purposes) the first to appropriate and use the water for the purpose specified in the act should have the superior right thereto.**

Hough v. Porter was referred to by the United States Supreme Court in Boquillas Cattle Company v. Curtis (213 U. S. 339) decided April 19, 1909. The case involved a conflict between a riparian owner and an appropriator and the Court after stating that the riparian doctrine was not applicable in Arizona, continued:

> **The opinion that we have expressed makes it unnecessary to decide whether lands in the arid regions patented after the act of March 3, 1877 . . . are not accepted subject to the rule that priority of appropriation gives priority of right by virtue of that act construed with Rev. Stat. 2339. The Supreme Court of Oregon has rendered a decision to that effect on plausible grounds.**

The Supreme Court of Washington, however, has refused to consider the Hough v. Porter rule sufficiently "plausible" to follow. In Still v. Palouse Irrigation & Power Co. (117 Pac. 466) decided August 19, 1911, the Court had before it a case somewhat similar to Miller & Lux v. Madera Canal Co., except that the defendant company attempting storage was also a riparian owner. The company contended for the rule laid down in Hough v. Porter, but the court held that "the act itself manifestly relates only to the reclamation of desert lands" and refused to apply the rule as the lands involved had not been entered under the Desert Land Act. As noted above, the Oregon Supreme Court held that the rule applied to all public land, which should be the construction if the decision

was rendered on "plausible grounds". The Supreme Courts of California, Montana, North Dakota and South Dakota (the remaining riparian right states to which the Desert Land Act applies) have not as yet been asked to accept the rule of Hough v. Porter and their position is therefore still doubtful.

Lateral Limits.

It has been shown previously that an appropriator can neither divert nor store flood waters when such might result in damage, present or prospective, to a riparian owner. Any large project, to protect itself, must therefore purchase the riparian land or the riparian right annexed thereto—it being well settled that the riparian right may be sold apart from the land.

The generally accepted lateral limit of riparian land is the margin of the watershed. The Supreme Court of Oregon, however, in Jones v. Conn (39 Ore. 30) has held that riparian lands are not so limited but extend to the exterior boundaries regardless of the watershed. It is the only state wherein a riparian owner, under the claim of riparian right, may divert the water of a stream beyond its watershed. The general rule is based on the idea that only those lands which border on and drain into a stream can be considered riparian thereto.

In two cases the California Supreme Court has materially restricted the lateral limits as shown by the following quotations:

In the case at bar the stipulation is that these fourteen quarter sections were granted each by a separate patent, each patent being based upon a separate entry, and these fourteen quarter sections therefore constitute fourteen distinct tracts of land, and mere contiguity cannot extend a riparian right which is appurtenant to one quarter section to another, though both are now owned by the same person. (Boehmer v. Big Rock Irr. Dist., 117 Cal. 27.)

If the owner of a tract abutting on a stream conveys to another a part of the land not contiguous to the stream, he thereby cuts off the part so conveyed from all participation in the use of the stream and from riparian rights therein, unless the conveyance declares the contrary. Land thus conveyed and severed from the stream can never regain the riparian right, although it may thereafter be reconveyed to the person who owns the part abutting on the stream, so that the two tracts are again held in one ownership. (Anaheim Union Water Co. v. Fuller, 150 Cal. 331.)

As later decisions have not modified the above rulings, they may be considered accepted in California. The Nebraska Supreme Court, in Crawford v. Hathaway, considered this question at great length and concluded:

A riparian owner's right to the reasonable use of water exists solely by virtue of his ownership of the lands over or by which the

stream flows. It is obvious that his right cannot be enlarged or extended by acquisition of title to lands contiguous to the riparian land; nor can a riparian owner, as such, rightfully divert to non-riparian lands water which he has a right to use on riparian land, but which he does not so use. . . . It being the policy of the government to dispose of its public domain in tracts of not less than 40 acres each, why, then, may it not be said that riparian rights are limited to such tracts, even though several of them may be joined together in one certificate of purchase or instrument of conveyance? It is not decided that such should be the rule in this state, as it is deemed preferable to have the question open for maturer investigation and consideration.

The Supreme Court of Texas in Watkins Land Co. v. Clements (86 S. W. 733) decided April 24, 1905, held that riparian rights "cannot extend beyond the original survey as granted by the government."

Were it not for the cases wherein lower riparian owners (on a showing of possible damage) have been allowed to stop the storage of flood waters by either riparian owners or appropriators, those interested only in power development might be strongly in favor of the riparian doctrine. Under it they can demand that the waters be allowed to flow to even the mouth of the stream if a power site there exists. The lower sites, however, are exceptional, and as present day developments necessitate storage, prospective power plants are as materially affected by the flood water decisions as irrigation projects. If the riparian doctrine must continue in force in so many western states, some relief can be secured by inducing the courts to further restrict the lateral limits. A general acceptance of the suggestion of the Nebraska Supreme Court that riparian rights be limited to forty acre tracts would lessen the difficulties in the way of the newer and larger projects.

The forty acre suggestion applies, of course, to public lands only. In California there are a great number of large Spanish grants, each of which must be considered a single parcel, and to such the suggestion would not apply. As those grants often extend from watershed to watershed, they contain large areas riparian to streams crossing them. While such a grant remains in a single ownership, the proprietor thereof, under the decisions cited, practically controls the streams as far as appropriators are concerned.

In the quotation from Anaheim Union Water Company v. Fuller, above, it is stated that in a partition of a riparian tract the part distant from the stream loses its riparian right "unless the conveyance declares the contrary". A number of

Spanish grants crossed by streams are now being subdivided, and the deeds are so drawn that the various parcels share in the riparian right, regardless of proximity to the stream. It is well settled that the parcels so conveyed retain the riparian right among themselves, but the western courts have not yet directly passed upon the question as to whether the owner of such a parcel, not touching the stream, can be considered to possess a riparian right as against an appropriator or riparian owner outside the original grant. Mr. Wiel, in the third edition of his splendid work on "Water Rights in the Western States", raises this question and, after an exhaustive study of the cases bearing on the point, concludes that such parcels not bordering upon the stream cannot be considered riparian when in conflict with rights outside of the grant. The conclusion is certainly based on sound reasoning and conforms to the basic idea that only lands bordering upon a stream are riparian thereto. This question will undoubtedly be raised in the near future and the hope of all appropriators is that the courts will accept Mr. Wiel's conclusion.*

In those instances where the land along the stream below a reservoir site was secured under the public land laws, the maximum limits of riparian lands (in California, Nebraska and Texas—the public lands in the last being state lands only) may be determined by an examination of the land office records, as only those forties which touch the stream, or were included with such forties in the original patent, can be considered riparian. Where the stream passes through lands which were part of a Spanish grant in California, abstracts of title must be examined in order to ascertain the least parcel touching the stream at one time in a single ownership. In the riparian states, other than California, Nebraska and Texas, the ordinary assessor's map showing ownership along the streams will give the riparian lands—they being those tracts in single ownership not extending beyond the watershed. The last statement must be modified for Oregon, as there the riparian land is not limited to the watershed.

Riparian Right Restricted to Riparian Land.

On account of the riparian right being so superior(in the riparian right states) to that of appropriation, there is a popular idea that a riparian proprietor actually owns the water and is not limited to its use on his riparian land. The courts, however, have consistently held to the contrary, as illustrated

*This paragraph is as it appeared in the first edition. The question has been presented to the Supreme Court of California in the case of Miller & Lux vs. J. G. James Co., now (Dec. 1, 1917) pending.

by the second quotation from Crawford v. Hathaway above. Of the many cases thus holding, one presenting unusual conditions is Duckworth v. Watsonville Water & Light Company (150 Cal. 520).

The Watsonville Company, in order to protect its diversion of the waters of Pinto Lake to Watsonville, had purchased either the riparian land or the riparian right for all the lands bordering on the lake. Duckworth leased a parcel of such riparian land, posted a notice of appropriation, initiated his diversion work and brought an action to have his water right determined as against the company. The company claimed that by the purchase of the riparian lands and the riparian rights, including those belonging to the parcel occupied by Duckworth, it was entitled to all of the waters of the lake. The following extract from the opinion clearly presents the Court's view:

We have said that the water company is entitled to a judgment protecting its riparian right, although it has not used, and does not immediately propose to use, the water on its riparian land. This rule does not apply to any right which it has acquired by appropriation or use upon other lands, and this appears to be the source of the right which it has been exercising. Such right depends upon use and ceases with disuse. (Civ. Code, 1411.) It extends only to the water actually taken and used. The consequence is that, so far as the protection of this right and the water necessary to supply this use are concerned, the water company is not entitled to prevent an appropriation or use by others of the surplus of waters of the lake, if there is any.

Attention has been called to language used by the Nevada Supreme Court in Van Sickle v. Haines, and by the California Supreme Court in Lux v. Haggin, which characterized the doctrine of appropriation as one certain to result in monopoly. The passage quoted immediately above tells another story.

Reasonable Use Among Riparian Owners.

As stated in quoting from Lux v. Haggin above, each riparian owner is entitled to a reasonable use of the water of the stream, and such reasonable use is a question of fact depending upon the circumstances of each particular case. In the recent case of Half Moon Bay Land Co. v. Cowell (173 Cal. 543), decided October 17, 1916, the California Supreme Court included among the many points to be considered the length of the stream, the volume of water in it, the extent of each ownership along the banks, the character of the soil owned by each contestant, the area sought to be irrigated by each, the practicability of irrigation of the lands of the respective parties, the expense thereof and the comparative profit of the different uses which could be made of the water

on the land. The Court held in the Half Moon Bay case "that when the water is insufficient for all the land or for all of the uses to which it might be applied thereon, and there is enough only for that use which is most valuable and profitable, the shares may properly be limited to and measured by the quantity sufficient for that use, and the proportions fixed accordingly". On account of the steep hillsides involved in the case, the trial court found only a small portion of the riparian lands were suitable for profitable irrigation, and the finding was upheld.

It is occasionally claimed that one using water for the development of electric power upon land riparian to the stream cannot rest for such use upon the riparian doctrine. In Mentone Irrigation Co. v. Redlands, etc. Co. (155 Cal. 323) the Supreme Court of California, in answering this claim, said:

> The use of the water in its passage through his land to operate a power plant thereon is as clearly within his rights as is his right to operate a mill thereon with which to grind grain or to operate any other machinery, than which there is no more ancient or well-established feature of riparian rights.

Riparian Rights to Navigable Waters.

The California Supreme Court in the early case of Heilbron v. Fowler Switch Canal Co. (75 Cal. 432), decided March 29, 1888, said:

> We see no occasion to discuss the question as to whether the river is navigable or not. In either event the result would be the same. The riparian owner on a non-tidal, navigable stream has all the rights of a riparian owner not inconsistent with the public easement.

The above statement can be considered to have the force of a **dictum** only, as the stream in question (Kings River) was said to be not navigable and the particular point was not argued. The Supreme Court of Washington in State v. Superior Court of Grant County (126 Pac. 945), decided October 10, 1912, after a careful consideration of the question decided that riparian rights to the use of water do not attach to lands bordering on navigable waters. Just how far other western states will go in following Washington remains for their Supreme Courts to decide. Where the constitutional declaration of state ownership of beds and shores is similar to that of Washington the decision will have very great weight.

Summary of Principles.

The riparian doctrine has been abrogated in the seven strictly arid states and has been adopted in the ten semi-

humid states of the irrigation zone. Of the ten, it has been held in Nebraska that the state water appropriation act annulled the riparian rights for public lands then unentered, and in Oregon that the congressional desert-land act did likewise.

The doctrine restricts the right to riparian lands and allows a reasonable use of water to all riparian owners, the measure of which will depend upon the conditions of the particular case. The right is not created by use and does not cease with disuse. As between a riparian owner and an appropriator, the former is not limited by any measure of reasonableness, and may restrain any diversion or interference with the flow (including flood waters) by the latter which may result in damage to his riparian land.

Except in Oregon, riparian lands are limited to the watershed. In California, Nebraska and Texas the right is further limited to the original tract granted by the government, and in California still further limited to the smallest tract at one time in a single ownership.

It is not improbable that the lateral limits may be ultimately limited in some states to the forty acre tract crossed by the stream, and that other states may follow Nebraska and Oregon in their construction of state and federal statutes. It is certain, however, that statutes annulling riparian rights existing prior to their passage are clearly unconstitutional. All such changes in the doctrine must be made by the courts and not the legislatures.

CHAPTER III

LAW OF UNDERGROUND WATERS

According to the Thirteenth Census the source of water supply for 433,630 acres of the total of 13,739,500 acres irrigated in 1909 in the western states was wells. Of this area 332,410 acres were irrigated from wells in California, for which state the total acreage irrigated was 2,664,100 acres. Although the area so irrigated is but a small percentage of the total, it is constantly increasing. The surface supply is being rapidly exhausted and future development in certain sections must rest entirely upon the underground supply. This fact is so well recognized in California that the larger power companies have initiated a campaign of education to interest farmers in the use of electric power for pumping. The gas engine and pump manufacturers are equally interested, and through their catalogues are making an effective argument for the introduction of pumping plants for irrigation.

There are two classes of natural underground waters—percolating waters and those that flow in a defined subterranean channel. Percolating waters have been well designated "vagrant, wandering drops moving by gravity in any and every direction along the line of least resistance".

Illustrations of underground waters moving in a defined channel are very familiar, and the so-called "sub-flow" of streams is especially common. In the previous chapter the case of Miller v. Bay Cities Water Company was considered at some length. Although the court therein discusses the California cases on percolating waters, Miller's source of supply was clearly a "subterranean channel", and his right the same as that of a riparian owner on a surface stream. Waters in subterranean channels have always been considered subject to the same legal principles as the waters of surface streams. In most jurisdictions underground waters are presumed to be percolating, and the burden of proving the

existence of a known and defined channel is on the one so asserting.

The common law rule is that percolating waters belong to the owner of the surface and such rule is generally accepted except as later stated in this chapter. An early California case—Hanson v. McCue (42 Cal. 303)—adopts the rule in the following language:

> Water filtrating or percolating in the soil belongs to the owner of the freehold—like rocks and minerals found there. It exists there free from usufructuary right of others, which is to be respected by the owner of an estate through which a defined stream of water is found to flow. The owner may appropriate the percolation and filtrations as he may choose, and turn them to profit if he can.

It must be appreciated that the task of showing the difference between the two classes of underground waters in a given case is very difficult. It means the introduction of much expert testimony with the usual conflict in scientific views. An excellent illustration is the pioneer case of Los Angeles v. Pomeroy (124 Cal. 597), wherein the city sought to condemn land in the San Fernando Valley for use in connection with its water supply system from the Los Angeles River. The city contended that the waters under the surface of the tract in question composed the subterranean flow of the Los Angeles River and therefore belonged to it under its "pueblo right"—a right under the Mexican law giving the pueblo paramount interest in the waters of streams. Pomeroy claimed that such waters were but percolating waters and therefore belonged to him as owner of the soil. Very elaborate models and relief maps were introduced in connection with the expert testimony on each side. The court decided that the evidence showed the existence of a well defined channel and that the underground waters were therefore part of the flow of the Los Angeles River and not percolating waters.

California and Washington are the only western states which have thus far departed from the common law rule of percolating waters. In the now celebrated case of Katz v. Walkinshaw (141 Cal. 116) the plaintiffs sought "to enjoin defendant from drawing off and diverting water from an artesian belt, which is in part on or under the premises of plaintiffs, and to the water of which they have sunk wells" for water for domestic purposes and for irrigating their lands overlying the artesian water. The defendant diverted "the water for sale, to be used on lands of others distant from the saturated belt". The plaintiffs contended that the subsurface water constituted an underground stream and that they were

riparian thereto. The defendant on the contrary alleged that the water rising in her wells was percolating water and therefore her property. The original opinion of the Supreme Court in the case, written by Mr. Justice Temple, was handed down November 7, 1902. The court therein held that the artesian body was percolating water and not an underground water course to which riparian rights could attach. Instead of holding, as the lower court had done, that the defendant could not be enjoined, the Supreme Court after citing the authorities and dwelling on the difference in conditions "in a country like Southern California, where the relative importance of percolating water and water flowing in definite water courses is greatly changed", concluded that a different rule was required and established the new rule of reasonable use.

A rehearing was granted in order that additional arguments might be presented by those "not parties to the action, but vitally interested in the principle involved", and the final opinion, written by Mr. Justice Shaw, was handed down on November 28, 1903. The opinion is very important on account of its treatment of the common law, in addition to the modification of the law of percolating waters, as shown by the following extract:

> The idea that the doctrine contended for by the defendant is a part of the common law adopted by our statute, and beyond the power of the court to change or modify, is founded upon the misconception of the extent to which the common law is adopted by such statutory provisions, and a failure to observe some of the rules and principles of the common law itself. In Crandall v. Woods, 8 Cal. 143, the court approved the following rule, quoting from the dissenting opinion of Bronson, J., in Starr v. Child, 20 Wend. 149: "I think no doctrine better settled than that such portions of the law of England as are not adapted to our condition form no part of the law of this state. This exception includes not only such laws as are inconsistent with the spirit of our institutions, but such as are framed with special reference to the physical condition of a country differing widely from our own. It is contrary to the spirit of the common law itself to apply a rule founded on a particular reason to a case where that reason utterly fails."

(It is a noteworthy point that the language of Mr. Justice Bronson quoted by Mr. Justice Shaw, was also quoted by Mr. Justice Ross in his dissenting opinion in Lux v. Haggin, wherein he argued that the common law rule of riparian rights, being unsuited to the existing conditions, should be rejected in California.)

After other forcible statements in regard to the adaptability and power of modification of the common law, the opinion describes at considerable length the semi-arid con-

ditions existing in a large part of California ("in almost all of the southern half of it"), the insufficiency of the natural streams as sources of irrigation supply, and the absolute need of the utilization of the underground waters. Following the statement that "The claim that the doctrine stated by Mr. Justice Temple is contrary to all the decisions of this court is not sustained by an examination of the cases", it proceeds to analyze the former California cases supposedly upholding the common law rule of percolating waters, beginning with Hanson v. McCue, and concludes:

In view of this conflicting and uncertain condition of the authorities it cannot be successfully claimed that the doctrine of absolute ownership is well established in this State. It is proper to state that in all the opinions which have so readily quoted and approved the supposed common-law rule, that injuries from interference with percolating waters were too obscure in origin and cause, too trifling in extent, and relatively of too little importance, as compared to mining industries and the wants of large cities, to justify or require the recognition by the courts of any correlative rights in such waters, or the redress of such injuries, there has been no notice at all taken of the conditions existing here, so radically opposite to those prevailing where the doctrine arose. It is also to be observed that in some instances in the eastern states, mentioned in the former opinion in this case, the injustice from the diversion of percolating waters has been so glaring and so extensive that the court there was compelled to depart from its previously decided cases and recognize the rights of adjoining owners.

The new rule established by the decision is well shown in the following paragraphs:

In controversies between an appropriator for use on distant land and those who own land overlying the water-bearing strata, there may be two classes of such land owners: those who have used the water on their land before the attempt to appropriate, and those who have not previously used it, but who claim the right afterward to do so. Under the decision in this case the rights of the first class of land owners are paramount to that of one who takes the water to distant land; but the land owner's right extends only to the quantity of water that is necessary for use on his land, and the appropriator may take the surplus. As to those land owners who begin the use after the appropriation, and who, in order to obtain the water, must restrict or restrain the diversion to distant lands or places, it is perhaps best not to state a positive rule until a case arises. Such rights are limited at most to the quantity necessary for use, and the disputes will not be so serious as those between rival appropriators.

Disputes between overlying land owners, concerning water for use on the land, to which they have an equal right, in cases where the supply is insufficient for all, are to be settled by giving to each a fair and just proportion. And here again we leave for future settlement the question as to the priority of rights between such owners who

begin the use of the water at different times. The parties interested in the question are not before us.

Katz v. Walkinshaw has been consistently followed in all subsequent percolating water cases arising in California. As far as the establishment of further rules is concerned, the most important of the subsequent cases is Burr v. Maclay Rancho Water Company (154 Cal. 428) decided in 1908, as the question left undecided in Katz v. Walkinshaw was presented. The plaintiff therein "sued to enjoin the defendant company from pumping water from its wells on land adjoining that of plaintiff and transporting such water to distant lands for irrigation". The plaintiff's land consists of three tracts—blocks 153, 190, and 191 of the Maclay Rancho Ex-Mission San Fernando. The three tracts overly the body of percolating water. Plaintiff's wells are on block 191 which is an irrigated orchard. For a short time part of block 190 was also irrigated. The right is claimed for the irrigation of all of blocks 153 and 190 as well as the present irrigated block 191. Defendant's wells are on block 192 and while its pumps are being operated "it is impossible for the plaintiff to obtain any water from his wells by means of his pumps".

In the consideration of the case the Court comments on the contrast between the new doctrine of percolating waters and the rule of riparian rights in regard to true conservation as follows:

It is not the policy of the law to permit any of the available waters of the country to remain unused, or to allow one having the natural advantage of a situation which gives him a legal right to water to prevent another from using it, while he himself does not desire to do so. The established and settled law of riparian rights in running streams, which have become vested rights, may compel a different rule with regard to such waters in some instances, but these rules of law do not, of necessity, control rights in percolating waters.

Certain headnotes used in reporting the case so well set forth the principles established that they are quoted in full:

Different owners of separate tracts of land, situated over common strata of percolating water, may, each upon his own lands, take by means of wells and pumps from the common strata, such quantity of water as may be reasonably necessary for beneficial use upon his land, or his reasonable proportion of such water, if there is not enough for all; but one cannot, to the injury of the other, take such waters from the strata and conduct it to distant lands not situated over the same water-bearing strata.

As between an appropriator of percolating water for use on distant land, and an owner of land overlying the water-bearing strata, who was using the water on his land before the attempt to appropriate, the rights of the overlying landowner are paramount. Such rights,

however, extend only to the quantity of water that is necessary for use on his land, and the appropriator may take the surplus.

After an appropriator of water from a common water-bearing strata has begun to take water therefrom to distant lands not situated over the strata, for use on such distant lands, the owner of other overlying land upon which he has never used the water, may invoke the aid of a court of equity to protect him in his right to thereafter use such water on his land, and thus prevent the appropriator from defeating his right, or acquiring a paramount right by adverse use, or by lapse of time. Such an appropriation for distant lands is subject to the reasonable use of the water on lands overlying the supply, particularly in the case of persons who have acquired the lands because of these natural advantages.

As against the owners of such overlying lands, either those who have used the water on their lands before the attempt to appropriate, or those who have not previously used it, but who claim the right afterwards to do so, the appropriator for use on distant land has the right to any surplus that may exist. If the adjoining overlying owner does not use the water, the appropriator may take all the regular supply to distant land until such landowner is prepared to use it and begins to do so.

In controversies between the owners of such overlying lands, and an appropriator of the water for use on distant lands, the court has the power to make reasonable regulations for the use of the water by the respective parties, fixing the times when each may take it and the quantity to be taken, provided they be adequate to protect the person having the paramount right in the substantial enjoyment of that right and to prevent its ultimate destruction. In the present case the judgment is directed to be modified in accordance with these rules.

Although the new rule of percolating waters is firmly established in California, Washington is the only other western state in which it has been followed. In Patrick v. Smith (134 Pac. 1076), decided September 15, 1913, the Supreme Court of Washington, in accepting the new rule said:

The principles of natural justice and equity demand the recognition of correlative rights in percolating subterranean waters so that each landowner may use such water only in a reasonable manner and to a reasonable extent upon his own land and without undue interference with the rights of other landowners to a like use and enjoyment of waters percolating beneath their lands.

The Supreme Court of Colorado in Smith Canal v. Colorado Ice Co. (82 Pac. 940) after referring to Katz v. Walkinshaw, said:

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

The Supreme Court of Idaho in Le Quime v. Chambers (98 Pac. 415), dealing with the appropriation of spring waters commented on the establishment of the new rule in California, but, as it considered the law of underground waters not necessary to the case before it, did not follow it. In the later Idaho case of Bower v. Moorman (147 Pac. 496) the Court held that under the Idaho statutes percolating waters are subject to the rule of prior appropriation in the same way that the waters of streams are. Idaho is therefore in a class by itself—it recognizes neither the common law rule of percolating waters nor the new California rule of correlative rights, but applies the rule of prior appropriation, "the first in time is first in right".

As stated in McClintock v. Hudson (141 Cal. 275), the new rule regarding percolating water "makes it to a great extent immaterial whether the waters in this land were or were not a part of an underground stream", provided the withdrawal of such waters by defendant can be shown to substantially affect the source of supply—well or stream—of plaintiff. The need of distinguishing between the two classes of underground waters still exists in all the western states except California, Idaho and Washington, and there the problem of proving the alleged damage to a source of supply remains and is generally a difficult one.

Statutes Regulating Artesian Wells.

As shown above, artesian waters are classed as percolating waters. The great potential worth of such wells is so evident that a number of western states have passed statutes declaring an artesian well not equipped with such mechanical appliances as will effectively control the flow from the well to be a public nuisance, and providing in more or less detail for the public regulation of artesian wells. In 1907, in the case of Ex parte Elam, 6 Cal. App. 233, the California District Court of Appeal upheld a California statute approved March 6th, 1907, providing for the prevention of waste from artesian wells and prescribing penalties therefor. As the doctrine of correlative rights regarding the use of percolating waters is recognized in California, it was expected that the court would so hold.

A far more interesting case than the Elam case is Eccles v. Ditto, 167 Pac. 726, decided September 13th, 1917, by the Supreme Court of New Mexico. A New Mexico statute authorizes the Artesian Well Supervisor of each county to repair wells, the waters of which are running to waste, and to bring suit if necessary to collect the expenses of such re-

pairs, which expenses become a lien upon the land. The Eccles case is said to be more interesting than the Elam case for the reason that New Mexico still follows the common law rule of percolating waters. In upholding the validity of the New Mexico statute in the Eccles case, however, the Supreme Court did not discuss the question of the ownership of percolating waters, but rested on the argument that the statute is a proper exercise of police power to abate nuisances. The opinion cites many cases from eastern states upholding the validity of statutes designed to prevent the waste of oil and gas. In commenting upon the New Mexico statute, the Court said (p. 728):

> There are two justifying reasons for the enactment of the statute under consideration by the legislature of this state, the first being the necessity of using water for irrigation and the limited quantity of water available. The artesian waters in a given district come from the same source, and are obtained by sinking wells to the common basin, thereby enabling the water to find its way to the surface. Necessarily, the waste of water derived from the common source of supply diminishes the amount of water available for legitimate uses, and hence works an injury and a detriment to the general public desiring to make use of such waters. The second reason is that permitting the water to run to waste in large quantities results in the "water logging" of lands, and destroys its productiveness. In the artesian belt in the Pecos Valley, it has been found necessary to construct drains at enormous expense to carry away the waters which find their way to the lower lands. Hence we find ample justification for the legislative act regulating the construction and use of such wells, thereby preventing the unnecessary waste of water.

Contrast of the California Rules of Percolating Waters and of Riparian Rights.

The owner of land overlying a body of percolating water corresponds to a riparian owner on a surface stream, and an appropriator of percolating waters for use on distant lands (that is, not overlying) corresponds to an appropriator of surface waters for use on non-riparian lands. Under the rule of riparian rights the riparian owner may perpetually enjoin the diversion or storage of the waters of a stream when such diversion is or may be of injury to him; and in the consideration of the question of probable damages the riparian owner cannot be restricted to a reasonable use. Under the new rule of percolating waters the times and amounts of use by overlying owner and appropriator may be fixed by the Court so that the overlying owner will have the first use of a reasonable amount for his overlying land and the appropriator the surplus for the distant land; and in

cases of present non-use by the overlying owner, the appropriator will be allowed to withdraw the water until the former is ready to use it. In brief, the new rule of percolating waters allows the widest possible use of the source of supply, while the rule of riparian rights results in waste. It is rather paradoxical to have the sub-surface supply, which is naturally conserved in the underground reservoirs, regulated by a wise rule, while the surface supply, which unless artificially stored or reasonably used must run to waste, remains unregulated.

In the previous chapter it was stated that the case of Lux v. Haggin fixed the modified doctrine of riparian rights in California seemingly for all time. This was so written as the general view, even among those strenuously opposed to the doctrine, is that the Supreme Court of California could not seriously consider the abrogation of the doctrine on account of the extensive rights which have been recognized as vested by the long line of decisions following the lead of Lux. v. Haggin. It is believed, however, that the riparian rights of consequence to single proprietors belong to the Spanish grants; that the most of these have been long irrigated and therefore fully protected under the doctrine of appropriation; and that those that remain are being or will be subdivided into small tracts, comparatively few of which will retain the riparian right, and which will therefore be better served by the doctrine of appropriation. There remain, in addition to the grants, the public land subdivisions immediately touched or crossed by the streams, and which lie in such narrow strips that usually no feasible irrigation scheme can be made to include them without including non-riparian lands also—that is, without resting on the doctrine of appropriation. The abrogation of the riparian rule would therefore not materially injure single proprietors, the aggregate of whose holdings now seriously retards the promotion of storage works.

Lux v. Haggin fixed the rule of riparian rights for the reason that California had adopted the common law and that it was the doctrine of the common law. Katz v. Walkinshaw rejected the common law rule of percolating waters as unsuited to the conditions existing in California.

The Court in Lux v. Haggin undoubtedly considered the riparian rule the best for the interests of the state, and looked upon the doctrine of appropriation as one certain to result in monopolies of the water supply. The present day view of this latter doctrine will be presented in the next chapter and, it is believed, the "monopolistic" idea will be shown to be untenable.

CHAPTER IV

THE DOCTRINE OF APPROPRIATION

Most of the western states have adopted statutes which place the control of water appropriations in the office of the state engineer. In all but a few, such statutes were but recently adopted, so that the great mass of water rights resting on the doctrine of appropriation must be defined by the principles laid down from time to time by the courts. In the first chapter it was stated that the California statutes (Sections 1410 to 1422 of the Civil Code) were but declaratory of existing law (established by the courts). Similar statutes were first adopted in the other western states and the court rulings throughout differ but little.

Right of Access—Appropriations Not Restricted to Public Lands

In Alaska Juneau Gold Mining Company v. Ebner Gold Mining Company (239 Fed. 638) decided Feb. 5, 1917, the United States Circuit Court of Appeals quoted with approval the following from the Cyclopedia of Law and Procedure: "The right of appropriation extends only to waters upon the public domain of the United States, or upon the public lands of a state, for one cannot acquire a water right on land held in private ownership by another without acquiring an easement in such land." 40 Cyc. 704. In the Alaska Juneau case the Alaska company had posted its notice of appropriation upon a mining claim which later became the property of the Ebner company. The court held that, as the act was without the consent of the owner of the property, it was an act of trespass and could not become the basis of a right to appropriate. In Marshall v. Niagara Springs Orchard Co. (125 Pac. 208), the Supreme Court of Idaho, after quoting with approval California and Montana cases, held that an appropriation of water cannot be made on private premises without the knowledge

and consent of the owner thereof. The two cases cited are but illustrations of many from different jurisdictions on the same point. It is from such decisions that the idea has become current that water can be appropriated on the public lands only.

During the early mining period all of the appropriators were trespassers upon the public domain, but as the government, under the act of 1866, recognized the rights which had accrued and allowed later comers to appropriate in the same way, a confusion of ideas has resulted between the **right of access** and the **right to appropriate.** The Alaska Juneau case and the Marshall case cited above really deal only with the **right of access,** and a study of the cases upon which the above quotation from the Cyclopedia of Law and Procedure is based shows that the point involved in such cases was the right of access. Although some of the confusion existing has resulted from decisions of the California Supreme Court, the following quotation from Duckworth v. Watsonville etc., Co., (150 Cal. 520) is sufficiently definite to clear the situation:

> **The right to appropriate water under the provisions of the civil code is not confined to streams running over public lands of the United States. It exists wherever the appropriator can find water of a stream which has not been appropriated and in which no other person has or claims superior rights and interests.**

In regard to appropriations and use on public lands not open to entry, it has been held by the Supreme Court of Washington in Avery v. Johnson (109 Pac. 1028) that no such right "can be acquired by one illegally occupying land in an Indian reservation, prior to the opening of the reservation to settlement under the homestead law." It will probably be generally held that one wishing to appropriate water for use on the public domain must at least have "some sort of possessory right, good as against everybody but the government," as "the beneficial use contemplated in making the appropriation must be one that inures to the exclusive benefit of the appropriator and subject to his complete dominion and control" (Lake Shore Duck Club v. Lake View Duck Club,—Utah—, 166 Pac. 309).

Waters Open to Appropriation

From many decisions which have been previously cited there can be no question about the right to appropriate the waters of streams on the public domain. In Sullivan v. Northern Spy Mining Company (11 Utah 438), decided June 17, 1895, the Supreme Court of Utah held that percolating waters developed by digging a well on the unoccupied public domain could be likewise appropriated, and that the appropri-

ator acquires the right to take water from such wells as against one who by subsequent location acquires title to the land.

The Alaska Juneau case is particularly interesting as it illustrates how the courts in one jurisdiction follow the accepted rules of prior appropriation in the other western jurisdictions. Alaska has no statutes governing the appropriation of water, so that the right to appropriate is still governed by the rules of the local mining districts, which rules are patterned after the practice of mining districts elsewhere in the west. Although the Utah Supreme Court in the Northern Spy case rests somewhat for its views, regarding the appropriation of percolating waters on the public domain, upon a Utah statute, the terms of the statute cannot be considered so special that the rule would not apply in other western states.

In Bear Lake etc., v. Garland (164 U. S. 1), the Supreme Court of the United States, in support of its statement that rights as against third persons are acquired by priority of possession, and that the government will and does recognize such rights as between the parties, cites the Northern Spy case as one of the many illustrations of the rule.

It is desired to emphasize the above paragraphs under this caption as there seems to be a tendency of those unfamiliar with the history of the development of the doctrine of prior appropriation to hold that only the waters particularly mentioned in the state statutes, providing for the appropriation of water, can be legally appropriated. The statutes governing appropriations refer to the waters subject thereto as "running water flowing in a river or stream," "natural water courses," "all waters," or use other expressions of the same nature, and a few enumerate in addition "lakes" and "springs". There have been many cases in both eastern and western jurisdictions in which the question of what is a "natural water course" has been given careful consideration. These cases generally deal with the question of damages done by surface or flood waters, and it is seldom that the point has to be carefully scrutinized in regard to the right to appropriate—this being so for the reason that practically all waters can be appropriated where one can gain the right of access thereto. One definition of a natural water course often quoted is the following from Los Angeles etc., v. Los Angeles (103 Cal. 466):

There must be a stream, usually flowing in a particular direction, though it need not flow continually. It may sometimes be dry. It must flow in a definite channel, having a bed or banks, and usually discharge itself into some other stream or body of water. It must be something more than a mere surface drainage over the entire face

of the tract of land, occasioned by unusual freshets or other extraordinary causes. It does not include the water flowing in the hollows or ravines in land, which is mere surface water from rain or melting snow (i. e., snow lying and melting on the land), and is discharged through them from a higher to a lower level, but which at other times are destitute of water. Such hollows or ravines are not, in legal contemplation, watercourses.

Navigable Waters

The statement that all waters of natural watercourses may be appropriated must be somewhat qualified in the case of navigable streams. In Miller v. Enterprise Company (142 Cal. 208) the plaintiff sought to enjoin the defendant, a subsequent appropriator, from interfering with his dam and ditch, and the latter defended its action on the ground that plaintiff's dam obstructed a navigable stream, the San Joaquin River. It was held that as the plaintiff had for many years appropriated water from the river, a navigable stream, without complaint from any public authority, state or national, and that while navigation had been interfered with, no person not connected with the government could complain. All cases between individuals raising the question of interference with navigation will undoubtedly be decided in the same way. It is well established, however, that the government may not only stop diversions from the navigable part of a stream, but also even those from the non-navigable part, including tributaries, if such diversions will interfere with navigation. (United States v. Rio Grande D. & I Co., 174 U. S. 690).

Waters of Lakes

In actual work lake waters are often appropriated. It was contended in the Duckworth case (above) that such waters were not "running water flowing in a stream", but the court held:

We think the better doctrine in respect to the character of a stream from which the statute provides for appropriations is that it is not necessary that the stream should continue to flow to the sea or to a junction with some other stream. It is sufficient if there is a flowing stream; and the fact that it ends either in a swamp, in a sandy wash in which water disappears, or in a lake in which it is accumulated upon the surface of the ground, will not defeat the right to make the statutory appropriation therefrom, and we can see no reason why the appropriation in such a case may not be made from the lake in which the stream terminates, and which therefore constitutes a part of it, as well as from any other part of the water course.

In Hough v. Porter (98 Pac. 1083) the Oregon Supreme Court held, contrary to the above, in speaking of riparian rights, that when water spreads, as in a swamp or marsh,

"with no well-defined current it cannot be deemed a water course". As the Oregon statutes now provide for the appropriation of "all waters" within the state, this ruling cannot affect appropriators.

Waters in Artificial Channels and Surface Waters

It is well settled that water in artificial channels or reservoirs cannot be appropriated, and waters artificially developed as in a mining tunnel and allowed to flow in a natural water course to place of intended use are likewise exempt. It has been held by the Supreme Court of New Mexico in Vanderwork v. Hewes (110 Pac. 567), decided August 9, 1910, that "seepage water or waters from snows, rain, or springs, not traceable to and forming a stream or water course" may be used by the owner of the land on which they rise and are not subject to appropriation without his consent. The rule was followed by the Idaho Supreme Court in King v. Chamberlin (118 Pac. 1099) decided Nov. 3, 1911, where the waters in question were surface waters collected in a reservoir on plaintiff's land.

In the first chapter the notice of appropriation from De Wolfskill v. Smith (5 Cal. App. 175) was given. It was for the water flowing from abandoned oil wells on the public domain. The Court held that as the water had gathered into a stream, it was immaterial "whether this stream is supplied by water percolating and filtering through the earth or not." The difference between this case and those cited in the last paragraph is that these waters, though artificially developed, had been abandoned, and the others had been retained in private possession.

Waste Waters

Many cases deal with the use of waste waters from upper irrigated land. Such cases are often brought by the lower user of such waters to prevent the upper irrigator from so changing his use or system that the water is no longer available to the lower user. It is well established that the lower user is entitled to no relief in such cases, as the upper irrigator is under no obligation to so accommodate the lower user —unless, of course, there is an express agreement to the contrary.

So far as the legal right to use waste or surplus waters is concerned, the following from the Nevada case of Bidleman v. Short (150 Pac. 834) is to the point, and expresses the rule which applies in other western states:

It is immaterial that the so-called surplus or waste waters are not subject to appropriation so as to establish a permanent right therein, as in the case of an appropriation of the waters of a natural stream. It may be that under the rule of economical use there should be no surplus or waste waters, neverthelss, so-called surplus or waste waters do at times exist and rights may be acquired therein which may continue so long as there is such waters. The complaint alleges the existence of such waters upon the lands of the plaintiffs Bidleman. So long as such waters exist upon their lands, it is their property, and they may consent to others acquiring rights therein upon their property and in ditches thereupon for the purpose of conveying such waters to the lands of such other parties.

Proceedings to Effect Appropriations

An appropriation has been defined as "the intent to take, accompanied by some open, physical demonstration of the intent, and for some valuable use."

Since the adoption of the early statutes providing for the posting of notices at the point of intended diversion, the "intent" is expressed in the notice. Following the notice, the steps are the recording of the notice and the initiation of the construction work within the time designated—generally ten and sixty days respectively—the prosecution of construction to completion with reasonable diligence and the application to beneficial use. If the steps be followed, the water right dates from the posting of the notice.

The question of reasonable diligence is a serious one and especially so as a very erroneous view is abroad in the land. A common idea is that all one need do "to hold the claim" is to act about as he would to hold a mining claim, and the result is that the occasional use of a shovel and wheelbarrow are supposed to satisfy the requirement. The error of this view was shown in a very early Nevada case, Ophir Mining Company v. Carpenter (4 Nev. 534) which is often quoted on this question by other courts. The following sentences are very much to the point and picture conditions of far too many of our so-called water claims:

If the labor of twenty men for three or four months, in a period of two years and a half, constitutes diligence in the prosecution of such a vast enterprise as this, it is difficult, if not impossible, to designate the entire want of diligence. The manner in which this work was prosecuted certainly does not accord with what is generally understood to be reasonable diligence. Diligence is defined to be the "steady application to business of any kind, constant effort to accomplish any undertaking." The law does not require any unusual or extraordinary efforts, but only that which is usual, ordinary and reasonable. The diligence required in cases of this kind is that constancy or steadiness of purpose or labor which is usual with men

engaged in like enterprises, and who desire a speedy accomplishment of their designs. Such assiduity in the prosecution of the enterprise as will manifest to the world a bona fide intention to complete it within a reasonable time. It is doing of an act, or series of acts, with all practicable expedition, with no delay, except such as may be incident to the work itself. . . . The weather would not have prevented work upon this ditch ordinarily more than three or four months in the year, hence labor upon it could probably have been prosecuted during eight or nine months out of every twelve. Here, however, there was a period of thirty months, when only about three months' work was done, or one month out of every ten. Rose during this time may have dreamed of his canal completed, seen it with his mind's eye yielding him a great revenue; he may have indulged the hope of providential interposition in his favor; but this cannot be called a diligent prosecution of his enterprise. Surely he could hardly have expected to complete it during his natural life by such efforts as were made through this period.

As the question of diligence is one of fact it will ordinarily, in case of litigation, be decided by a local jury. The jury may have a far less stringent view of "that constancy or steadiness of purpose or labor," than the ordinary engineer, but it will be obliged to decide on at least a fair degree of it. The size and character of the works, the natural conditions, including climate and material, and all other modifying elements, must be considered. Illness or lack of money are generally held to be no excuse for delay but the latter has been accepted as a valid excuse in Colorado and Idaho.

Section 1422 of the Civil Code of California was amended in 1903 to provide that when the "place of intended diversion or any part of the route" is within a national park, forest reserve or other reservation, the claimant shall have sixty days from the date of approval of his application to occupy such national park, etc., within which to commence work. Although not so provided by statute in other states, the delay caused in getting the approval of federal bureaus will be excused in passing upon the question of reasonable diligence. In Grant Realty Co. v. Ham, Yearsley and Ryrie (165 Pac. 495), the Supreme Court of Washington held that "condemnation for a site for an impounding dam or intake by an appropriator who does not own such a site is just as much matter incident to the enterprise to which the dam or intake is an essential as is the actual construction of the dam or intake" and that, therefore, the delay in actual construction work caused by the prosecution of condemnation proceedings with reasonable diligence is excusable.

The state statutes providing for posting notices of appropriation fix the date of the posting of notice as the incep-

tion of the claim under it. Where there are no statutes to govern the specific appropriation the original court rule applies (see quotation from Conger v. Weaver in first chapter), and the right relates back to the first substantial act of the appropriator for the acquisition of the right, whether that act be the actual commencement of construction work or other necessary work incident thereto, provided always that reasonable diligence is exercised in finally perfecting the appropriation. This rule was applied by the Supreme Court of Washington in Sumner Lumber and Shingle Co. v. Pacific Coast Power Co. (131 Pac. 220), as the Court held that the appropriation statutes of Washington did not require a notice in appropriating water for power purposes. As stated in the first chapter, in citing Wells v. Mantes, where the statute does provide posting of notice, one who does not follow the statute loses the benefit of the doctrine of relation and his priority dates only from the completion of the construction work.

Incomplete Appropriations

Prior to the completion of the diversion works and the readiness to apply the water to beneficial use the appropriation is incomplete. In Rincon Water & Power Company v. Anaheim Union Water Company (115 Fed. 543) Judge Welborn after quoting Sections 1415 to 1418 of the California Civil Code said:

> It is obvious that a person who intends to become an appropriator under these sections cannot acquire the exclusive right to the use of the water he intends appropriating, nor maintain any suit, either at law or in equity, for its diversion, until all the steps requisite to an appropriation have been taken. . . . From the statutory enactments and general principles above quoted and stated, the conclusion is not only fair, but unavoidable, that the only right which a person acquires by posting a notice is the right to prosecute without interference the works necessary to consummate his intended appropriation.

The question was more recently before the California Supreme Court in two cases, resulting from the operations of Los Angeles in the Owens Valley—Inyo Consolidated Water Company v. Jess (161 Cal. 516) decided Dec. 11, 1911, and Merritt v. Los Angeles (162 Cal. 47) decided Jan. 19, 1912. The plaintiff in each case had filed a notice of appropriation on a stream within a national forest and had made application to the Forest Service for permission to construct the conduit. No work had been done in either case as the Forest Service had not acted on the application, and Section 1422 of the Civil Code allowed 60 days after the grant of permission from the federal authorities in which to begin construction. Each action was brought to obtain an adjudication of the alleged

conflicting claims, and the lower court, following the early decisions, decided that the plaintiff had no property interest on which to base the suit. The Supreme Court, however, decided that the plaintiff had "an incomplete, incipient, conditional right in the water, which is a vested interest in real property, and which may be adjudged to be such in an action to determine conflicting claims". In the later case the Supreme Court added:

Such judgment, of course, should not declare the plaintiff absolutely entitled to the water, nor enjoin the defendant from taking or using it during the intervening time prior to the completion of plaintiff's works to a stage which will enable him to divert and use it. It should only declare and describe the plaintiff's contingent right to use the water and enjoin adverse claims or uses injurious thereto.

The only effect of the two decisions, therefore, is to secure to the owner of an incomplete right a determination of conflicting claims. They do not allow interference with either construction of works or actual diversions.

The Measure of the Right

Under a great many of the early decisions not only was the maximum capacity of the ditch decreed, but very often the amount mentioned in the notice, which might be far in excess of the maximum capacity. The holders of these old rights very naturally looked upon the amount decreed as their water, whether they had use for it or not, and believed that they had the right to sell as desired. No court would tolerate such a view today. It is now generally held that a right to the use of water is limited in time and volume to the extent of the needs of the possessor thereof.

The rule is well illustrated by the following quotation from McCoy v. Huntley (119 Pac. 481) decided by the Supreme Court of Oregon Jan. 15, 1912:

We see no reason why, even in cases involving prior and subsequent appropriations of water, the courts cannot require the appropriators to alternate in the use of the water. The time when water may be used recklessly or carelessly has passed in this State. With increasing settlement water has become too scarce and too precious to justify any but an economical use of it. An appropriator has only the right to use so much as his needs require and at the time his needs require. And if these are satisfied by a use of the whole flow every other day, or every alternate week, he ought not to be heard to complain. It is evident that from some cause or from a variety of causes the waters of Pine creek are diminishing in volume at the point where the parties to this controversy are residing. It is now probable that to divide the water, without alternating, would injure both parties. A test, since the preliminary order was made in this case in 1906,

indicates that by the method adopted both parties can raise good crops and both prosper.

Another excellent statement of the rule is the following from the Montana case of Conrow v. Huffine (138 Pac. 1094):

Under this rule, the extent of the right of the first appropriator is measured by the capacity of the original ditch. After the use has been installed, however, if the capacity of the ditch exceeds the amount required for reasonable use, the necessity for the use, and not the size of the ditch, is the measure of the extent of the right * * * The tendency of recent decisions of the courts in the arid states is to disregard entirely the capacity of the ditch and regard the actual beneficial use, installed within a reasonable time after the appropriation has been made, as the test of the extent of the right.

In the Alaska Juneau case the lower court, in its findings of fact, had fixed the capacity of the diversion flume of the Ebner Mining Co. as 3200 inches, but in its decree it awarded said company 10,000 inches—the amount stated in the notice of water appropriation posted in behalf of the company. In remanding the cause to the court below, the Circuit Court of Appeals ordered that the decree should be changed to conform to the capacity of the flume. This order is in accordance with the well accepted principle that the first measure of an appropriator's right is the amount stated in his notice, but that his right upon the completion of his diversion works is limited to the capacity of such works.

Principles of Prior Appropriation

Probably the best judicial summary of the principles of prior appropriation appearing in the reported cases is that of Judge Hawley in Union Mill & Mining Company v. Dangberg (81 Fed. 73), decided May 24, 1897. It was Judge Hawley who, when a Justice of the Nevada Supreme Court, wrote the opinion in Jones v. Adams overruling Van Sickle v. Haines and abrogating the doctrine of riparian rights in Nevada. His opinions in both the law of mines and the law of waters show a deep knowledge of the industries affected and an earnest desire to assist in bettering conditions. The reader will find the Dangberg case both interesting and instructive. The summary follows:

Under the principles of prior appropriation, the law is well settled that the right to water flowing in the public streams may be acquired by an actual appropriation of the water for a beneficial use; that, if it is used for irrigation, the appropriator is only entitled to the amount of water that is necessary to irrigate his land, by making a reasonable use of the water; that the object had in view at the time of the appropriation and diversion of the water is to be considered in connection with the extent and right of appropriation; that,

if the capacity of the flume, ditch, canal, or other aqueduct, by means of which the water is conducted, is of greater capacity than is necessary to irrigate the lands of the appropriator, he will be restricted to the quantity of water needed for the purposes of irrigation, for watering his stock, and for domestic use; that the same rule applies to an appropriation made for any other beneficial use or purpose; that no person can, by virtue of his appropriation, acquire a right to any more water than is necessary for the purpose of his appropriation; that, if the water is used for the purpose of irrigating lands owned by the appropriator, the right is not confined to the amount of water used at the time the appropriation is made; that the appropriator is entitled, not only to his needs and necessities, at that time, but to such other and further amount of water, within the capacity of his ditch, as would be required for the future improvement and extended cultivation of his lands, if the right is otherwise kept up; that the intention of the appropriator, his object and purpose in making the appropriation, his acts and conduct in regard thereto, the quantity and character of land owned by him, his necessities, ability, and surroundings, must be considered by the courts, in connection with the extent of his actual appropriation and use, in determining and defining his rights; that the mere act of commencing the construction of a ditch with the avowed intention of appropriating a given quantity of water from a stream gives no right to the water unless this purpose and intention are carried out by the reasonable, diligent, and effectual prosecution of the work to the final completion of the ditch, and diversion of the water to some beneficial use; that the rights acquired by the appropriator must be exercised with reference to the general condition of the country and the necessities of the community, and measured in its extent by the actual needs of the particular purpose for which the appropriation is made, and not for the purpose of obtaining a monopoly of the water, so as to prevent its use for a beneficial purpose by other persons; that the diversion of the water ripens into a valid appropriation only where it is utilized by the appropriator for a beneficial use; that the surplus or waste water of a stream may be appropriated, subject to the rights of prior appropriators, and such an appropriator is entitled to use all such waters; that, in controversies between prior and subsequent appropriators of water, the question generally is whether the use and enjoyment of the water for the purposes to which the water is applied by the prior appropriator have been in any manner impaired by the acts of the subsequent appropriator. (Union Mill & Mining Company v. Dangberg, 81 Fed. 73.)

CHAPTER V

LOSS OF WATER RIGHTS

Water rights, like other real property, may be lost by abandonment, forfeiture, adverse user or prescription, or estoppel.

Abandonment and Forfeiture

Abandonment is often defined as "the relinquishment or surrender of rights or property by one person to another", but in the law of waters abandonment simply adds to the unappropriated public waters and the benefits therefrom are not intended to accrue to a particular person. It consists of the two elements, act and intention; although the latter is generally considered the "essence" thereof. As stated in Utt v. Frey (106 Cal. 397):

> The mere intention to abandon, if not coupled with yielding up possession or a cessation of user, is not sufficient; nor will the nonuser alone without an intention to abandon be held to amount to an abandonment. Abandonment is a question of fact to be determined by a jury or the court sitting as such.

The intention to abandon must be shown by nonuse and similar acts, but nonuse, unless continued for an unreasonable period, will not be sufficient. The presumption created by even an unreasonable nonuse may be overcome by satisfactory proofs. The opinion of the Supreme Court of Montana in Smith v. Hope Mining Company (45 Pac. 632) is especially noteworthy as the water to run a mill had not been used for nine years, but the machinery was cared for and maintained in good condition during the period of nonuse. The Court said:

> It is true that the evidence shows without controversy that the Algonquin Company did not use the waters, in their mill or otherwise, for a period of about nine years following 1883. But mere nonuser of a water right is not abandonment. The nonuser of water for so long a period, and especially a period longer than the statute of limitations, is certainly very potent evidence, if it stood alone, of an intention to

abandon. . . . But whatever force the fact of nonuser for nine years may have had in showing an intention to abandon, that force was wholly offset and contradicted by the other evidence in the case, so as to leave, in our opinion, not even a conflict of testimony.

As riparian rights to the use of water do not depend upon use nor cease with disuse, they cannot be lost by abandonment, so that this question can only be raised regarding rights by appropriation. Although water rights and ditches are generally thought of as one, they are distinct property interests and either may be held without the other. A ditch can accordingly be abandoned without abandoning the water right. Likewise water may be turned into natural water courses for diversion at lower points without it being held an abandonment—that is, the waterway may be used as part of the ditch system. It is also held without exception that the point of diversion, the place of use and the manner of use may be changed without loss of right, provided no other user is injured thereby.

As non-use under the court rulings simply raises the presumption of abandonment, a number of the western states have fixed by statute a definite period for which non-use will work a forfeiture of the right. The prescribed period in Utah is seven years; in Idaho, Nevada and Wyoming five years; in New Mexico four years; in California, North Dakota and South Dakota three years; in Oklahoma two years; in Oregon one year. Both the Utah and Oregon statutes contain the added provision that a question of abandonment shall be one of fact, to be tried and determined as other questions of fact. The virtue of the two statutes is thereby destroyed as the aim of such statutes is to definitely fix the period of non-use which shall constitute a forfeiture, and thus preclude court proceedings to determine the intention.

Section 46 of the South Dakota irrigation act of 1907 provides that, when a party entitled to the use of water fails to beneficially use all or any portion of the waters claimed by him for a period of three years, such unused waters shall revert to the public. The Supreme Court of South Dakota in St. Germain Irrigating Co. v. Hawthorn Ditch Co. (143 N. W. 124) held that the section is void as to a riparian owner but valid as to an appropriator. It added, "A riparian right to use such waters of a flowing stream cannot be lost by disuse".

Section 20a was added to the California water commission act in 1917, and is practically the same as Section 46 of the South Dakota statute, commented on above. Prior to 1917 there was no California statute fixing the period of non-use which would ripen into a forfeiture. The case of Smith v.

Hawkins (110 Cal. 122) is, therefore, still of importance in California, and has been cited as a leading authority on the question of forfeiture, or loss of right through nonuse, in other jurisdictions. The court therein distinguishes between abandonment and forfeiture, and on account of its importance the following long quotation is given:

Section 1411 of the Civil Code declares that the appropriation must be for some useful or beneficial purpose, and when the appropriator or his successor in interest ceases to use it for such purpose, the right ceases. This section deals with the forfeiture of a right by nonuser alone. We say nonuser, as distinguished from abandonment. If an appropriator has, in fact, abandoned his right, it would matter not for how long a time he had ceased to use the water, for the moment that the abandonment itself was complete his rights would cease and determine. Upon the other hand, he may have leased his property, and paid taxes thereon, thus negativing the idea of abandonment, as in this case, and yet may have failed for many years to make any beneficial use of the water he has appropriated. The question presented, therefore, is not one of abandonment, but one of nonuser merely, and, as such, involves a construction of Section 1411 of the Civil Code. That section, as has been said, makes a cessation of use by the appropriator work a forfeiture of his right, and the question for determination is, How long must this nonuser continue before the right lapses?

Upon this point the legislature has made no specific declaration, but, by analogy, we hold that a continuous nonuser for five years will forfeit the right. The right to use the water ceasing at that time, the rights of way for ditches and the like, which are incidental to the primary right of use, would fall also, and the servient tenement would be thus relieved from the servitude.

In this state five years is the period fixed by law for the ripening of an adverse possession into a prescriptive title. Five years is also the period declared by law after which a prescriptive right depending upon enjoyment is lost for nonuser; and for analogous reasons we consider it to be a just and proper measure of time for the forfeiture of an appropriator's rights for a failure to use the water for a beneficial purpose.

In the preceding chapter it was stated that under the doctrine of prior appropriation one is given a reasonable time after the completion of the diversion works in which to apply the water claimed to beneficial use. In the case of an irrigation project this application requires a number of years which is definitely fixed in those states where appropriations are made by application to the state engineer, but which, in states where the posting of notices is still tolerated, is limited only by the rule of reasonable diligence. This time limit for the larger projects has seldom been passed upon in the reported cases. The five-year period fixed in Smith v. Hawkins must not be taken as a precedent in cases of incomplete appropria-

tions, as in the latter the right to the full amount of the appropriation is conditioned upon the irrigation of all the land under the ditch within a reasonable time. Smith v. Hawkins deals with a right which had become completely vested and later fell into disuse. It is believed that the larger irrigation projects will be allowed a longer period than five years in which to apply all the water to beneficial use, as the settlement of such generally necessitates a greater time.

Adverse Use or Prescription

These are a very few cases involving the alleged wrongful diversion of water in which a right by adverse use or prescription is not pleaded. Nevertheless there are very few cases in in which such title is upheld, as it is seldom that a case presents all the elements necessary to prove adverse use. In order to ripen into title the adverse use must be continuous for the statutory period, open, notorious, peaceable, under claim or color of right, and to the damage of the water-user against whom the right accrues. The burden of proof is on the claimant of the adverse title.

The statutory period referred to is the period provided in the statute of limitations regarding actions pertaining to real property. The period for the western states is as follows: Arizona, three years; California, Colorado, Idaho and Nevada, five years; Utah, seven years; Montana, Nebraska, North Dakota, Oregon, Texas, Washington and Wyoming, ten years; Kansas, fifteen years; South Dakota, twenty years. By "continuous" is not meant that the use should be unceasing for the period, but simply that the claimant used the water during such times as he needed it. In the case of irrigation the water might be needed but one day during each month of the irrigation season, and such use if made for the statutory period would be held "continuous."

"Open" and "notorious" signify that the use has not been by stealth but on the contrary "before all the world", so as to be generally known. "Peaceable" (or "uninterrupted") means that the original possessor of the right has not interfered with the adverse use. Any interference or interruption, however slight, will prevent the acquisition of the right. Mere verbal protests, however, are not considered interruptions—the latter must be due to some physical act, such as closing down a headgate, cutting a ditch bank, or breaking a diversion dam.

The claimant must consider and treat the right as his own and not acknowledge a superior claim on the part of the original owner. If at any time during the statutory period

permission to divert the water has been sought, the adverse claim must fail.

That the use has been to the damage or detriment of the original possessor is generally the most difficult of the many points to prove. Regarding the damage as between appropriators, Judge Hawley in Union Mill and Mining Company v. Dangberg (81 Fed. 73) said, "There must have been such a use of the water, and such damage, as would raise a presumption that complainant would not have submitted to it unless the respondents had acquired the right to use it."

In the first edition of this book, the writer stated that the current idea, that an appropriator in California by diversion and use for five years secures an absolute right as against lower riparian owners, was erroneous. This statement was based upon decisions of the California Supreme Court made at that time indicating that the diversion by an appropriator will be allowed in all cases where injury, either present or future, would not be done to riparian owners. It was believed that a diversion which did not directly damage the riparian owner could not be considered adverse. The recent California case of Horst Company v. Tarr Mining Co. (163 Pac. 492) clearly shows, however, that the "current view" is the correct one. In that case the lower riparian owners attempted to enjoin the upper appropriators, who had been diverting the waters of Bear River for upwards of fifty years, on the grounds that the diversion had only recently, and within five years of the initiation of the suit, deprived the riparian owners of the natural flow of the stream. The Court held, however, that the plaintiffs were entitled to the full flow of the stream by their lands at all times and that any taking above to non-riparian lands was an invasion of their rights, whether they used the water or not, and regardless of the fact that the water remaining in the stream may have been sufficient for their needs and uses. The diversion for five years, therefore, gave the appropriators "a perfect title in fee, good against all lower riparian proprietors * * *." The case is especially strong on this point as the plaintiffs claimed that the defendants in former years had brought from other sources and emptied into Wolf Creek, a branch of the Bear River, water equivalent in amount to that diverted from the main stream, and that for this reason the natural flow of the stream at plaintiffs' land was unaffected.

It should be apparent to all that an appropriator can secure no adverse title against an upper riparian owner, but cases are constantly arising where this plea is made. In Rog-

ers v. Overacker (4 Cal. App. 333) the California District Court of Appeal in dealing with such a plea said:

> The rule seems to be as laid down in Bathgate v. Irvine, 126 Cal. 135, 77 Am. St. Rep. 158, 58 Pac. 442, and Hargrave v. Cook, 108 Cal. 72, 41 Pac. 18, 30 L.R.A. 390. In the first case it was said, approving the latter case, that a lower riparian owner cannot acquire a right, either by prior appropriation or by prescription or adverse user, as against an upper riparian proprietor whose rights antedate the appropriation and user, and the mere nonuser of the water by the upper proprietor and his permitting the water to pass down to the lands of the lower owner cannot make the user of the lower owner adverse or strengthen his claim of appropriation or prescription.

The expression "as against an upper riparian proprietor whose rights antedate the appropriation and user" refers to the well settled rule that the rights of the appropriator are superior to those of the riparian owner where the former had initiated his appropriation while the riparian land in question was unentered public land. Occasionally, even in the reported cases, the rights of the appropriator are considered superior if initiated before patent issued for the riparian land. The present accepted view is, however, that the riparian owner's rights date from his entry of the land and not from the issuance of patent, and, therefore, to be superior, the appropriator must have initiated his rights to the water prior to the time the riparian owner initiated his rights to the land.

Estoppel

"Estoppel by silence" arises where a person who, by force of circumstances, is under a duty to another to speak refrains from doing so and thereby leads the other to believe in the existence of a state of facts in reliance upon which he acts to his prejudice (16 Cyc. 681).

Although the general principles of appropriation are understood by those diverting or intending to divert water, and especially the rule that the subsequent appropriator takes only what is left, it is very common to have the claim made that no notice of the rights of the opposing party was given and that said party is estopped from setting up a superior right. The courts very early in the mining period expressed themselves strongly to the contrary, but the claim still persists. In a comparatively recent California case dealing with underground waters it is said:

> The mere fact that the defendants expended money in sinking the wells and putting in the pumps each upon his own land, with the knowledge of the plaintiffs and without objection by them, creates no estoppel. A mere passive acquiescence when one is under no duty

to speak does not raise an estoppel. (Verdugo Canyon Water Company v. Verdugo, 152 Cal. 655.)

Practically the same language has been used in a number of cases where the point was raised. It is theref re established beyond doubt that neither a riparian owner nor an appropriator need serve notice of existing rights upon a subsequent appropriator engaged in the construction of diversion or storage works.

Rights of Way by Prescription

Rights of way for ditches may be acquired by prescription in the same way as water rights. The most serious element in so proving is the "color of title". After a ditch has been constructed and operated for years it is very difficult to show that the right does not rest upon permission to occupy given by the owner of the land crossed—that is, parol license. The statute of frauds provides that interest in real property can be conveyed only by written instruments. As a ditch right of way is such an interest, the original and strict legal rule is that the right cannot be founded on a parol license; but the rule has been modified, if not reversed, in a great many of the states.

In the case of Gustin v. Harting (121 Pac. 522), decided Feb. 17, 1912, the Supreme Court of Wyoming considered at great length the question as to whether the plaintiff had acquired a right of way for a flume by prescription and also the right to maintain it under an irrevocable license—it being admitted that the flume had been constructed with the parol consent of the landowner, the defendant. It was held that, under the existing facts, the license was irrevocable and the right to maintain the flume secured by prescription. In reaching its conclusion the Court said:

> The principle that a parol license, when executed by the expenditure of money or labor, if not given for a mere temporary purpose, becomes irrevocable, has been recognized and applied in several other cases involving irrigating works.

Among the many cases cited and examined in support of the principle are some from California, Colorado, Nebraska and Oregon, showing that they also recognize the modified rule. To these Idaho, Nevada and Utah may be added.

The Supreme Courts of Montana and Washington refuse to accept the modified rule. In Archer v. Chicago M. & St. P. Ry. Co. (108 Pac. 571), decided April 2, 1910, the Supreme Court of Montana considered cases in favor of the new rule but held that, "sound . . . . . reasoning sustains the rule that a parol license of the character of the one under consideration is always revocable at the pleasure of the licensor."

CHAPTER VI

WATER RIGHT LEGISLATION

Sections 1410 to 1422 of the Civil Code of California are given in the first chapter to illustrate the earliest legislation governing the appropriation of water. As shown, the sections simply provide for the posting and recording of notices, and for the benefits of the doctrine of relation. They include no provision for public inspection at any stage. They are likewise silent regarding the adjudication of water rights and the public distribution of water in accordance with decrees.

A little reflection will convince the reader that the goal sought in water right conflicts is the distribution of water among those entitled to its use. Litigation resulting in an adjudication of water rights is but the means to this end. Likewise, an orderly system for the proper record and control of the initiation of water rights is designed to fix the priority of the new rights so that the water may be distributed in accordance therewith without further adjudication or litigation.

Legislation regarding water rights to be complete, therefore, must provide for the three essentials: the acquirement or initiation of rights; the definition or adjudication of existing rights; and the distribution of water among those entitled to its use. In the following paragraphs the main provisions of the legislation covering these three points will be discussed by states, beginning with Colorado.

Colorado

Acquirement of Rights.—The first statutes regarding water rights adopted in the various western states were patterned after those of California. The first state to make any advance was Colorado where the office of state engineer was established in 1881.

At the same session the so-called "Map and Statement" act was adopted but, owing to a defective title, was held un-

constitutional in 1899. A second act, very similar to the first, was passed in 1903, and now governs the acquirement of rights. It provides that within sixty days after the commencement of the surveys or of the actual construction of any ditch or reservoir or enlargement or extension thereof, a filing must be made in the office of the state engineer of duplicate maps and statements containing the information required by the act and of a form satisfactory to the state engineer. If satisfactory to the state engineer one copy is filed in his office and the other certified and returned to the claimant who must, within 90 days from date of commencement, file it in the office of the county clerk of county in which the headgate or reservoir lies. It is further provided that a certified copy of the map and statement shall be prima facie evidence of the intent of the claimant. The Act of 1881 provided that the right dated back to the commencement of the work upon compliance with the act and the exercise of reasonable diligence in construction. The present act is silent on this important point, but where all the prescribed steps are taken the courts will undoubtedly hold that the right dates from the commencement of the work.

The state engineer has issued a circular containing the list of fees (Act of 1911), text of forms, and the rules and regulations in regard to the preparation of maps and statements. The circular states, "It is compulsory to use the forms of statements and affidavits as given herein. It will save time and delays." There is no question, therefore, but that the state engineer has a satisfactory record of the intention of new appropriators in Colorado, but there his supervision ends. Other than the provision that due diligence in construction must be exercised, the act is silent regarding any record of proof thereof, so that the claimant, in case of dispute, must settle the point in the courts. In regard to the acquirement of rights, therefore, Colorado has but slightly improved upon the old system.

Adjudication of Rights.—Colorado in 1879 and 1881 adopted a special procedure for the adjudication of water rights. It was provided that on or before June 1, 1881, every claimant of an interest in a ditch or reservoir within any water district should file with the clerk of the district court having jurisdiction a sworn statement setting forth among other things the date of his appropriation by original construction, also by enlargement or extension, the amount of water claimed, the existing capacity of ditch and the number of acres lying under and being or proposed to be irrigated

by each ditch or reservoir. Since the date for filing such claims, June 1, 1881, an adjudication of all rights to water from a common source within a district is initiated by one or more interested persons (who have filed the required claim) petitioning the district court having jurisdiction. The judge either sets a day for the taking of evidence in open court or, as is the usual practice, appoints a referee to take and report the evidence, make an abstract and findings upon same and prepare the decree. The referee gives notice of the times and places at which he will take the required evidence and proofs of priority. In regard to the facts to be ascertained, the act provides:

> Said referee shall also examine all witnesses to his own satisfaction, touching any point involved in the matter in question, and shall ascertain as far as possible the date of the commencement of each ditch, canal or reservoir, with the original size and carrying capacity thereof, the time of the commencement of each enlargement thereof, with the increased carrying capacity thereby occasioned, the length of time spent in such construction or enlargement, the diligence with which the work was prosecuted, the nature of the work as to difficulty of construction, and all such other facts as may tend to show compliance with the law in acquiring the priority of right claimed for said ditch, canal or reservoir; and upon all the facts so obtained shall be determined the relative priorities among the several ditches, canals and reservoirs, the volume or amount of water lawfully appropriated by each, as well as by means of the construction, as by the enlargements thereof, and the time when each such several appropriations took effect.

After closing the testimony the referee prepares the report and form of decree and files it with the court, which after properly ordered hearings either approves or modifies the same.

The act provides in detail for the many steps in the procedure and is sound from the technically legal standpoint. Its weakest point is that it does not provide for representation of the public or the state. Many of the older decrees gave to each party the amount of water claimed, which was generally far in excess of the maximum capacity of the ditch. There should have been measurements by the state engineer of the ditches and the acreage irrigated, but he is not mentioned in the act. Furthermore, the districts with which the act deals do not always include an entire stream, so that the adjudication in such cases is but partial. Aside from the trouble caused by the excess decrees, the act is to be commended as providing at so early a period in the history of irrigation a special procedure whereby most of the rights were determined.

Distribution of Water.—By an act passed in 1879 Colorado divided its irrigated territory into a number of districts generally comprising a designated creek, or creeks, and tributaries. For each district there was provided a water commissioner to be appointed by the governor from persons recommended by the boards of county commissioners interested. The principal duty of the water commissioner is to divide the waters of a stream among the ditches according to the prior rights of each, and in so doing to wholly or partially shut the headgates of the later appropriators to satisfy the earlier rights. He is also authorized to shut off the supply from any ditch so that the water delivered will in his judgment not allow a wasteful or wrongful use. The changing or interference with any headgate adjusted by the water commissioner is a misdemeanor subject to a fine of $300, or an imprisonment of 60 days, or both, and the use of water so wrongfully taken through such a headgate is made prima facie evidence of the guilt of the user. The water commissioners are further empowered to arrest persons meddling with headgates or using water procured through such. The salary of the water commissioner is $5 per day and is paid by the counties served. He does not begin work until called on by two or more persons controlling ditches in his district, or by the division engineer. He may engage necessary assistants at $2.50 per day.

In 1887 Colorado was divided into four divisions along drainage lines with a division superintendent in charge of each division. In 1903 the number was changed to five and the title to division engineers, who are now appointed by the governor from a certified list prepared by the state engineer after an examination of applicants. The division engineers receive from $1,500 to $2,500 per year and traveling expenses, and are paid by the state. The division engineers have general control over the water commissioners of the several districts within their divisions, and, under the general supervision of the state engineer, execute the laws relative to the distribution of water. They may make regulations to secure the fair apportionment of water in accordance with the rights of priority. They are required to make stream measurements and rate ditches, and to perform such other duties as the state engineer may direct. Ditch owners feeling themselves injured may appeal from the acts of water commissioner to division engineer, and from the latter to the state engineer.

It will be readily appreciated that the task of dividing water among ditches with valuable crops at stake is a serious

undertaking, and an account of the daily variations in the flow of mountain streams requires much local study and experience. Colorado's plan of having a small number of great divisions along drainage lines each with a state official having jurisdiction therein, and a number of districts within each division of such size that the diversions may be regulated by one man and an assistant or two, was not only the first to be fixed by statute but remains the type to be followed at the present day.

Colorado has done more in the construction and operation of reservoirs than any other western state. Among the many statutes it has upon this subject is one allowing "the owner of a reservoir to deliver stored water into a ditch entitled to water or into the public stream to supply appropriations from said stream, and take in exchange therefor from the public stream higher up an equal amount of water, less a reasonable deduction for loss, if any there be, to be determined by the state engineer; . . ."

In the 15th Biennial Report of the state engineer of Colorado (1909-1910) is a chapter entitled "Running Reservoir Water in Natural Streams," in which the state engineer describes a series of measurements made to ascertain the losses in running water from mountain reservoirs to lower ditches. The question of such losses is an important one in all of the irrigation states, and the work done in Colorado will serve as a guide elsewhere.

Wyoming

Acquirement of Rights.—The office of territorial engineer in Wyoming was created in 1886 but the existing legislation, of which the state is so proud, came with statehood in 1890. By constitutional provision the state is divided into four divisions (the limits being fixed by the legislature) with a division superintendent at the head of each, the office of state engineer is provided, and a Board of Control consisting of the state engineer, as president, and the four division superintendents, is given "supervision of the waters of the state, and of their appropriation, distribution and diversion" subject to legislation thereon.

The statutes adopted in 1890 provide a method of acquiring rights very different from any then existing in this country. Instead of posting a notice or starting work and thus initiating a right, the intending appropriator is required to make application to the state engineer for permission to make the appropriation. The application is made on a blank form furnished by the state engineer and among other things

must state the location and description of the proposed ditch, the time within which it is proposed to begin construction, the time required for completion of construction and the time required for complete application of water to proposed use. If for irrigation, the application must also give the legal subdivisions of land proposed to be irrigated. The state engineer must approve all applications made in proper form and for beneficial purposes, except where there is no unappropriated water, or where the proposed use conflicts with existing rights, or threatens to prove detrimental to the public interest—in which cases he must reject the application.

If approved, the application will be so endorsed and returned to the applicant, and constitutes his authorization to begin construction and perfect the appropriation.

In cases of applications in excess of 25 second feet, or to reclaim over 1000 acres, the state engineer, before acting on the application, may require additional information in regard to the financial ability and the good faith of the applicant. In the endorsement of approval on the application it is required that actual construction must begin within one year from date of approval, that the construction must be completed within five years from said date, and that final proof of beneficial use of water must be submitted within two years after expiration of time allowed by the state engineer for application to beneficial use. The state engineer has authority to limit the construction period and the period required for application to beneficial use to a less time than asked for, and also, for good cause shown, to extend the time for the completion of works under an issued permit, and also the time for completing the application of water to beneficial use. Any party may appeal from any action taken by the state engineer to the Board of Control, and from an action by the Board to the district court.

Applications must be accompanied by maps prepared in accordance with the regulations of the state engineer, and profiles and plans may be required also.

The statutes do not provide the nature of the proof to be submitted by the appropriator on the completion of the works and on the complete application to beneficial use other than it "being made to appear to the satisfaction of the Board of Control that any application has been perfected in accordance with such application, and the endorsement thereon." On such a showing the Board must issue a certificate setting forth the amount of the appropriation and the number and

date of priority thereof, which date shall be that of filing the application in the office of the state engineer.

In 1903 a statute specially providing for the appropriation of water for storage in reservoirs was adopted. The steps outlined above must be followed except that a description of the land to be irrigated by the stored water is not required in the primary, or first, permit. Those who are to apply the water to beneficial use may secure the secondary permit allowing them to do so. The latter shall not be given until the state engineer is convinced that the secondary permittee has a sufficient agreement with the owner of the reservoir, the primary permittee. The 1903 statute also provides for special supervision by a water commissioner when such stored waters are allowed to run to points of use through natural channels and where loss through wrongful diversion is probable en route. When deemed necessary for the protection of the various interests involved, the state engineer may appoint an assistant engineer to superintend and direct the construction work on dams for such reservoirs.

Definition of Rights.—Although new to American legislation, the Wyoming method for the acquirement of rights is far less novel than its method for the definition of rights. In 1886 Wyoming, then a territory, adopted the Colorado system of adjudication but rejected it in 1890 for its present system.

Instead of leaving the determination of water rights to chance cases between two or more claimants, or to a special procedure initiated by a claimant as in Colorado, Wyoming, having by its constitution declared the natural waters to be the property of the state, decided to make its new Board of Control responsible for this most important matter.

The Board selects the streams on which rights are to be determined and fixes a time for the taking of testimony. The state engineer through assistants makes a survey of the ditches and the land irrigated or irrigable thereunder and measures the stream and carrying capacity of the ditches. A printed form, called "proof of appropriation", is sent to each claimant. The present practice is to have the division superintendent make the survey and have the claimant make the "proof of appropriation" on the completion of the survey of his individual holding, so that the "proofs" and survey will correspond.

On the completion of the survey and the taking of testimony or "proofs" by the division superintendent, notice is given of a time and place at which the evidence thus as-

sembled shall be open to inspection of the various claimants. A regular procedure is provided for contests and hearings before the division superintendent, if such are required after the open inspection.

After the contests, all the evidence, including original proofs and testimony taken at the subsequent hearings, is transmitted to the Board of Control. At its first regular meeting thereafter, the Board examines all the evidence and enters an order establishing the priorities of the water rights, their amounts, and the character of use of each. For irrigation rights, the maximum allowance is one-seventieth of a second foot to the acre. Certificates are issued to each claimant in accordance with the order of the Board. Appeals from the order may be taken to the district court within sixty days.

Distribution of Water.—As stated above, Wyoming has been divided into four divisions along drainage lines. The superintendents thereof have powers similar to those of the division engineers in Colorado, regarding the division of the waters among ditches entitled thereto. The Board of Control creates districts where necessary and these districts are in charge of water commissioners upon whom the actual duty of closing headgates rests. The entire Wyoming procedure in regard to this matter is copied from that of Colorado and what difference exists is only in minor details.

Nebraska

In 1889 Nebraska adopted legislation providing for the appropriation of water by posting notices as in California, but in 1895 introduced an entirely new system closely following that of Wyoming. As the state at that time was in financial straits, it aimed to create as few new offices as possible and therefore provided that its state board of irrigation should be composed of the governor, attorney-general, and the commissioner of public lands and buildings. In 1911 the name of the board was changed to "The State Board of Irrigation, Highways and Drainage." The board appoints an hydraulic engineer as secretary and he is known as the state engineer. The striking difference between the statutes of Wyoming and Nebraska is the comparative brevity of the latter—otherwise the Wyoming language is closely followed.

Acquirement of Rights.—The sections providing for the acquirement of rights are practically the same as those of Wyoming. The application is made to the board (the secretary, or state engineer, acting for the board) on a printed form furnished by the state engineer, and when in proper form is

approved "if there is unappropriated water in the source of supply . . . . and if such appropriation is not otherwise detrimental to the public welfare." It is elsewhere further provided, however, that "if a prior appropriation has been made to water the same land to be watered by the applicant" the application shall be rejected.

It was undoubtedly intended by those who drafted the section that a "prior appropriation" meant a perfected appropriation—that is actual use, or potential use, of water on the land. It is rather an empty expression from any practical point of view and is one instance where the Wyoming section was not followed. Unfortunately for the state the expression was construed by its Supreme Court in Farmers' Irrigation District v. Frank (100 N. W. 286), and it was held that the board could not approve an application to irrigate any land described in an approved application. As the law did not provide that an applicant must make any showing of his title or interest in the land described, the effect of the decision was to deprive one of his right to appropriate water for the simple reason that some promoter had described his land in a former application which had been approved without any notice to the land owner.

In the case cited, Frank had described thousands of acres belonging to residents of the Farmers' Irrigation District. The case was decided in 1904 and although it evoked bitter criticism from those deprived of what they believed to be a "natural right" the section was not amended until 1911, when the following words were inserted: " . . . and no permit to irrigate any land shall be allowed unless the owner or owners of such land shall give consent to the same in proper form, duly acknowledged before some officer legally qualified to take acknowledgements."

By a 1913 amendment it is provided that the cost of promotion and engineering work shall not be considered as part of the cost of construction, and that one-tenth of the total construction work shall be completed in one year. It is also provided that in the case of an application for power purposes, the applicant, after the approval of such application, shall file a monthly statement showing the actual amount of moneys expended for "'right of way and land, labor, salaries, material and machinery, not including construction equipment, delivered upon the ground. * * *"

Definition of Rights.—The "definition of the priorities of right to use the public waters of the state" is left to the board of irrigation. Instead of fixing a detailed procedure as in Wy-

oming the statute provides that "the method of determining the priority and amount of appropriation shall be determined by the said state board. The board accordingly has adopted rules to govern the taking of "proofs of appropriation" and hearings in cases of contests.

As in the case of applications to acquire rights, the real work is left to the state engineer. Most of the determinations of the old rights have been made without actual surveys by the state engineer. The state was, therefore, quickly covered, but it is probable that in some cases larger acreages were allowed than should have been.

After the completion of the determination "certificates of appropriation" are issued to appropriators, as in Wyoming, the maximum allotment for irrigation being one second foot for each 70 acres and in no case to exceed three acre feet per year (as amended in 1911). Appeals may be taken to the district court within 60 days of the determination.

Distribution of Water.—The system for dividing water among the ditches entitled to its use is the same as in Colorado and Wyoming. By statute the state has been divided into two divisions with division superintendents in charge. Before 1911 the title was "under-secretary".

Prior to 1911 the state board created districts within the division on the petition of interested parties, but in 1911 the board was empowered to divide the divisions into subdivisions and the latter into districts as they believed necessary. The board appoints one water commissioner for each district. (Prior to 1911 the title was "under-assistant.") In 1911 it was provided that appropriators on April first of each year must give the division superintendent a list of the lands to be watered during the year. Until 1915, the water commissioners were paid by counties. The statute was amended in 1917 to provide for their payment by the state board. Nebraska is the first state to so provide, but the unanimous recommendation of those in charge of water distribution in all of the western states is that the state, and not the county, should pay the salary and expenses of the water masters, or commissioners.

Idaho

The office of state engineer was created in Idaho in 1895, but his duties were principally in regard to operations under the Carey Act until the adoption of the "new legislation" in 1903.

Acquirement of Rights.—Idaho follows the system introduced by Wyoming of making intending appropriators apply

to the state engineer on printed forms furnished by him. The instructions issued by the state engineer state that "application will not be accepted nor permit granted thereunder, unless the following instructions are carefully carried out, in preparing the application blank and maps"—it being required that duplicate maps must be filed before the permit will be granted and where the application is for more than 25 second feet the maps must be prepared from actual surveys.

As the Idaho constitution provides that "The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied," the right of rejecting applications deemed detrimental to the public welfare, etc., has not been delegated to the state engineer, but he must approve all applications made in proper form and contemplating application to beneficial use.

The maximum allowance for irrigation purposes is one second foot to 50 acres, and for storage 5 acre feet per acre. The maximum time allowed to complete the construction of works is five years and that for applying water to beneficial use six years (four years in the 1903 statute) in addition thereto. If application to beneficial use is not completed within the period allowed, the date of priority is advanced from the date of filing by an amount equal to the additional time which elapses before such application is complete. Delays due to government legislation or litigation operate to extend the time allowed for completion of construction. A 1915 statute provides that, for applications involving more than 25,000 acres, proof of application to beneficial use may be made at any time within ten years after the completion of the works; and that in such cases it is only necessary to show that the quantity of water applied for has been used within the limits of the project, regardless of whether each acre within the project has been irrigated.

It is further required that one-fifth of the construction work shall be done in one-half the time allowed and adverse claimants may contest the right when this is not done. For appropriations not in excess of 25 second feet construction work must be commenced within sixty days of issuance of the permit, and for other appropriations a bond in an amount to be fixed by the state engineer, not exceeding $10,000, must be filed within the said sixty days with the state engineer as a guarantee that the work will be completed as provided in the permit. In order to clear the records of the state engineer's office of permits on which the owner has fai'ed to comply with the requirements as to date of commencement

of work, filing of bond, completion of one-fifth of the work in one-half the time or final completion, the state engineer shall notify the owner giving the grounds on which concellation is proposed and allowing 30 days to show cause why the permit should not be cancelled. Unless sufficient showing is made by the owner of the permit the state engineer may cancel it, the owner if aggrieved having the right of appeal to the district court.

The 1903 Idaho statute was the first to provide a regular procedure for proofs of completion of construction and also proofs of complete application to beneficial use. At least sixty days prior to the date set for the completion of the works the holder of the permit must notify the state engineer of readiness to submit proof, on a form furnished by him containing among other information the amount of water such works can carry and, if for irrigation, the description of the land which can be irrigated. In cases of diversions in excess of 50 second feet the facts set forth in the notice must be certified to by a competent irrigation engineer. If the application is for over 6.4 second feet, the notice is published by the state engineer in a paper of general circulation in county where works are situated and such publication also states the time and place of submission of final proof. Before the time set the state engineer has the works inspected and after such time, and the consideration of any protests which may be made, he issues a certificate stating among other things the purpose of works, the quantity of water which can be carried to place of use, and, if for irrigation, a description of the lands for which water has been made available by the works.

The same procedure is followed in submitting proof of complete application to beneficial use. If satisfied that the law has been complied with after an examination of all the evidence in relation to such final proof, the state engineer issues a license confirming such use. The date of priority of right under such license is that of filing of application in state engineer's office.

Adjudication of Rights.—The 1903 Idaho statute left the adjudication of water rights to the courts, but provided that actions could be initiated by a water commissioner for the adjudication of rights to the waters of a stream which had been partly adjudicated.

It was also provided that whenever a suit to adjudicate rights is filed the court "shall request the state engineer to make an examination of such stream, and the canals and ditches diverting water therefrom, and of all the land being

irrigated by such canals and ditches and other works," and the map and report resulting from such examination shall be "accepted as evidence in the determination of such rights by such court."

The provision for the initiation of actions by a water commissioner was declared unconstitutional in Bear Lake v. Budge (75 Pac. 615). In Boise City Irrigation & Land Company v. Stewart (77 Pac. 25) the provision for requesting the state engineer to examine and report upon the physical conditions was held to be merely directory and not mandatory. The preparation of physical data by the state engineer has been so satisfactory, however, that it is certain that the court will request his services in most cases. The costs of his work are apportioned by the court among the parties to the suit, become a lien against the real property in question, and, if necessary, are collected as ordinary taxes.

Distribution of Water.—The 1903 act provided for three water divisions, for the appointment by the governor of a water commissioner for each division, and for a state board of irrigation to be composed of the three water commissioners and the state engineer. The board had authority to divide the divisions into water districts and to "devise all needful rules for the distribution of water." In 1915 the sections providing for the water commissioners and prescribing the duties thereof were repealed, and the duties of the commissioners were vested in the state engineer.

Utah

As the first Mormon settlements in Utah were absolutely dependent upon agriculture, and that upon irrigation, the need of legislation regarding water rights was early recognized. The first territorial legislature, in 1852, gave the control of all "water privileges" to the county courts and authorized them to "exercise such powers as in their judgment shall best . . . subserve the interests of the settlements in the distribution of water for irrigation or other purposes." The court of Salt Lake County was the only one to act under the statute and it granted water rights, settled disputes in regard thereto and appointed water masters to distribute water according to decrees. The court at that very early date acted about as the Board of Control does in Wyoming today, and if the other county courts had done likewise there would have been no need of further legislation.

Due to the neglect of the courts, other than that of Salt Lake County, to enforce the law, other legislation was adopted in 1880 and in 1897—the latter following the 1872 California

statute. The office of state engineer was also created in 1897, but he had little authority regarding water rights until 1903 when the present statute was adopted.

Acquirement of Rights.—The present system of acquiring water rights in Utah is based on that of Wyoming and Nebraska. The application contains the additional information of "the time during which it (the water) is to be used each year"—that is the right is, or may be, restricted to certain periods within the year. A notice of the application must be published for 30 days in a newspaper of general circulation within the watershed so that a protest may be made to the state engineer by parties claiming prospective injury and thus assist him in determining whether the new appropriation will conflict with existing rights.

The 1903 statute provided for a hearing in case of protests, but in 1904 such a procedure was prohibited by court order. No appeal was taken to the supreme court and the provision was omitted when the law was re-enacted in 1905.

In 1903 statute also authorized the state engineer to reject an application which he deemed detrimental to the public welfare. Following such an action in 1904 the state engineer was reversed by court decree and, again, the case was not appealed and the provision was omitted in the 1905 statute. By an amendment of 1911, the state engineer must approve all applications except where they will conflict with existing rights, or where, after submission of the question to court, the latter decides that the application is not for the most beneficial use of the water.

By an amendment of 1911, Utah follows the 1903 Idaho statute regarding time of beginning and completing work and application to beneficial use, but the state engineer is authorized, for good cause shown, to extend the five-year and four-year periods to a maximum aggregate allowance of fourteen years from date of approval of application.

Proof of completion of work is made on regular forms, attested by two witnesses, and accompanied by certified detailed maps. The state engineer issues a certificate of appropriation when satisfied that "the appropriation has been effected."

Adjudication of Rights.—Under the system adopted in 1903, the adjudication of rights is initiated by the state engineer making a complete survey of the "river system or water source" and collecting all necessary data. After completion of survey a statement is filed with clerk of district court, who mails form for statement of claim to each claimant. The

state engineer tabulates the claim and files such with clerk of court. The court may appoint a referee to take further testimony. The decree is rendered by the court based on the maps and data of state engineer, the statements of claims, and the testimony taken before referee. A certificate is issued to each owner in accordance with the decree.

The system has not yet been fairly tried as the surveys and collection of data have not been completed for the first stream chosen—the Weber River. The early work was done on an elaborate scale, and the funds necessary for completion are not available.

Distribution of Water.—The state engineer is authorized to divide the state into water districts and a water commissioner is appointed by the governor for each district from persons recommended by the state engineer. These water commissioners have the same duties as in the states already discussed, the only innovation is that the state has not been divided into large divisions with superintendents in control.

Nevada

Nevada first legislated regarding water claims in 1866 when it provided for the filing of certificates and plats by intending appropriators. Further legislation was adopted in 1889 and in 1899—the latter being copied after the Wyoming statute, but, as the county instead of the state was made the unit, nothing was done. In 1903, through the efforts of Senator Newlands, who had been probably the foremost leader in securing the passage of the National Reclamation Act of June 17, 1902, the Nevada legislature created the office of state engineer and provided for the definition of water rights and the distribution of water. The influence of the expected benefits of the Reclamation Act on the passage of the 1903 Nevada act is shown by the preamble to the latter, wherein the entire Reclamation Act is recited and in addition many paragraphs are included presenting the opportunities for irrigation development in Nevada and the need of a determination of rights before national aid could be given.

Acquirement of Rights.—The 1903 statute contained no provision for the acquirement of rights, but it was supplemented in 1905 by sections so providing copied from the Wyoming and Nebraska statutes and containing the requirement of publication first adopted in Utah. In 1907 the maximum quantity which could be appropriated for irrigation purposes was fixed at three acre-feet per acre per year. This maximum annual allowance was changed in 1909 and 1913, and is now as follows:

Where water is diverted for direct irrigation, not to exceed one one-hundredth of one cubic foot per second for each acre of land irrigated; the measurement to be taken where the main ditch enters or becomes adjacent to the land to be irrigated; due allowance for loss to be made by the state engineer in permitting additional water to be diverted into said ditch. Where water is stored, not to exceed four acre feet for each acre to be supplied; that is, four acre feet per acre stored in the reservoir, the losses of evaporation and transmission to be borne by the appropriator.

Adjudication of Rights.—The 1903 statute provided a method for defining rights which followed the Wyoming system except that no details of procedure were prescribed—it being, in that respect, similar to the 1895 Nebraska statute. In 1913 the "water code" was re-enacted in much expanded form, and details of procedure in determining rights were provided. The Supreme Court of Nevada in Anderson v. Kearney (142 Pac. 803) held that the order of determination (under the 1913 statute) was administrative only—that without a decree of court an order of an administrative officer was not final. The "code" was accordingly amended in 1915 to conform to the new Oregon procedure (described herein under "Oregon").

Distribution of Water.—In 1901 a state board of irrigation consisting of the governor, attorney-general and surveyor-general was created to co-operate with federal bureaus in stream gauging and irrigation investigations. In 1903 the state engineer was made a member and secretary of the board. Formerly the board had authority to divide the state "into such water divisions or water districts as seem to it advisable," and to appoint water commissioners to divide the waters of streams according to priorities, but the power to define districts is now in the state engineer and the power to appoint is in the governor.

New Mexico, North Dakota, Oklahoma and South Dakota

In accordance with resolutions adopted by the legislatures of Oregon and Washington in 1903-1904 a commission was appointed by the governor of each state to draft a water code. As a result of a joint session of the two commissions with officials of the United States Reclamation Service, Mr. Morris Bien, supervising engineer of the Service in charge of land and legal matters, agreed to prepare a draft for the commissions. Mr. Bien's draft was widely circulated in order to receive the benefit of the criticism of many interested in the subject. The corrected draft is generally referred to as the "Bien Code," and, although Mr. Bien aimed to take what he

considered best from all the existing codes, most closely follows the 1903 Utah statute. It was not adopted in Oregon and Washington but was in North Dakota, Oklahoma and South Dakota in 1905 and in New Mexico in 1907.

Acquirement of Rights.—As provided in the 1903 Utah statute, applications must be made to the state engineer who, for stated causes, has the power of rejection. Notice of application is published and evidence of interested parties considered. In case of approval the state engineer fixes the time for completion of works and for application to beneficial use, not exceeding five years and four years additional respectively from date of approval. He has the power, for causes stated, to extend such times three years and two years respectively. Regarding the proof of completion of works and application to beneficial use the code follows Idaho.

Adjudication of Rights.—That part of the code dealing with the determination of water rights is restricted to five short sections. The state engineer makes "hydrographic surveys and investigations of each stream system . . . obtaining and recording all available data for the determination, development and adjudication of the water supply of the state." Upon completion of survey, the state engineer delivers what data is deemed necessary to the attorney general who enters "suit on behalf of the state for the determination of all rights to the use of such water, in order that the amount of unappropriated water subject to disposition by the state under the terms of this act may become known."

In any suit over water rights all claimants must be made parties and, when such suit is filed, the court shall direct the state engineer to make surveys and assemble the necessary data. The aim of the sections is to allow the state engineer to secure a determination of the rights on streams most used for irrigation and also to provide for a complete determination on those streams where suit is entered by private parties.

Distribution of Water.—The distribution of water is cared for as in the states previously discussed. The state is divided by the legislature into three or more divisions along drainage lines. A commissioner is appointed for each division and the commissioners with the state engineer form the board of water commissioners. The state engineer divides each division into districts and the commissioner appoints a water master for each district. In 1913 the office of commissioner in South Dakota was abolished, and the duties thereof given to the state engineer.

Oregon

As stated above, Oregon appointed a "water code commission" in 1903, but little was done at the 1905 session of the legislature beyond creating the office of state engineer. In 1907 a second commission recommended the "Bien Code," but it did not pass. In 1909, following the recommendation of a commission which had its disposal the able assistance of Clarence T. Johnston, then State Engineer of Wyoming, a code was adopted which varies but little from that of Wyoming.

The state is divided into two water divisions with a division superintendent in charge. The two superintendents and the state engineer form the board of control (now called "state water board"). Contrary to the uniform practice elsewhere all three officers are elected instead of appointed.

The only striking departure from the Wyoming system is the procedure for defining rights. The sections in regard thereto are almost word for word the Wyoming sections up to and including the determination of rights by the state water board. Instead of considering such final unless appealed from, the Oregon statute provides that a certified copy of the determination and the original evidence shall be filed with the clerk of the circuit court which fixes a time for hearing the determination. The court after the necessary hearings either affirms or modifies the determination of the board.

A minor difference in the method of adjudication is that the determination in Oregon is initiated not by the board of its own motion, but by petition of one or more water users upon the stream. As the board always has before it more petitions for determination than it can act upon, it is clear that the change in procedure is of no practical importance.

The new legislation adopted in the western states prior to the 1909 statute in Oregon, is silent in regard to riparian rights, although such rights are recognized in Nebraska, Oklahoma and the Dakotas. The Oregon statute, however, provides that the use of riparian proprietors shall be limited to the extent of the beneficial use prior to the passage of the act or, where works were under construction at the date of passage, to the amount of water applied to beneficial use in a reasonable time as fixed by the state water board. In Oregon it is well settled that a riparian owner may elect to rely upon his riparian rights or upon his rights by appropriation, but he cannot do both as in California. (In re Sucker Creek, 163 Pac. 430.) Probably on account of this necessity of choosing between the two and also on account of the time limitation of

the riparian doctrine fixed in Hough v. Porter (see Chapter II), very few claimants appearing before the water board claim as riparian owners. Prior to March 1, 1917, the water board had determined the rights of 3664 claimants, a very limited number of whom had set up riparian rights and, with one exception, all proved rights by appropriation.

California

Acquirement of Rights.—The office of state engineer was established by the California legislature in 1878 for "the acquirement of data upon which the state might formulate the policy and frame legislation respecting irrigation matters." Although the office continued for 10 years and assembled much valuable data, it was unsuccessful in securing any new legislation. In 1900 the California Water and Forest Association, in co-operation with Irrigation Investigations of the United States Department of Agriculture, made a study of water right conditions on eight typical California streams, and in 1902 framed a draft of a "water code" for submission to the legislature of 1903. The antagonism to the proposed bill was so bitter that it was not introduced.

In 1911 an act governing the appropriation of water for **power purposes only** was passed. Applications to appropriate were made to a board of three, called the State Board of Control. At a special session of the legislature in 1911-1912, the name of the board was changed to State Water Commission. Under the original 1911 act licenses for power purposes were limited to twenty-five years. Under the amended 1911-1912 act, the license period was extended to forty years.

The Conservation Commission of California was created in 1911. One of its duties was "to prepare and recommend to the legislature laws, statutes, and constitutional amendments revising, systematizing, and reforming the laws of this state upon forestry, water, the use of water, water power, electricity, electrical and other power. . . ." As a result of the work of the Conservation Commission, the State Water Commission Act was passed by the 1913 legislature, but was withheld by referendum and did not go into effect until December 19, 1914.

The act is similar to the new legislation followed in Wyoming in regard to the initiation of rights, except that a commission of three members passes upon such applications instead of the state engineer. In its declaration of waters which are public waters and subject to appropriation, the act excepts such waters as "have been or are being applied to useful and beneficial purpose upon, or in so far as such waters

are or may be reasonably needed for useful and beneficial purposes upon lands riparian thereto." Regarding use upon riparian lands, the act further provides:

> If any portion of the waters of any stream shall not be put to a useful or beneficial purpose to or upon lands riparian to such stream for any continuous period of ten consecutive years after the passage of this act, such nonapplication shall be deemed to be conclusive presumption that the use of such portions of the waters of such stream is not needed upon said riparian lands for any useful or beneficial purpose, and such portion of the waters of any stream so nonapplied, unless otherwise appropriated for a useful and beneficial purpose is hereby declared to be in the use of the state and subject to appropriation in accordance with the provisions of this act.

Section 20 of the act contains a provision not found in the other western water codes. It is that at any time after the expiration of 20 years after the granting of a license "the state or any city, city and county, municipal water district, irrigation district, lighting district or political subdivison of the state" shall have the right to purchase the works and property used under said license, and the licensee or permittee shall accept such permit or license "under the conditions precedent that no value whatever in excess of the actual amount paid to the state therefor shall at any time be assigned to or claimed for any permit or license granted or issued under the provisions of this act," in case of public service regulation or in case of sale to the public units enumerated above. Section 20 also provides that the application for a permit by municipalities for the use of water "for domestic purposes shall be considered first in right, irrespective of whether they are first in time."

Section 23 of the 1913 act was also amended at the 1917 session. Before amendment section 23 provided for an application fee of $2.50 per theoretical horsepower up to 100 horsepower, of $500 from 100 to 10,000 horsepower, and of $1000 above 10,000 horsepower, and of $10 for purposes other than power. It also provided for an annual charge, after the issue of license, of 25 cents for each theoretical horsepower, and of ten cents per miner's inch for other purposes. The section as amended provides for a filing fee of $5 and, upon the issue of a permit, the additional fee of 10 cents per theoretical horsepower up to 100 horsepower, of 5 cents per horsepower from 100 horsepower to 1000 horsepower, and of one cent per horsepower above 1000 horsepower; also, if for agricultural purposes, of 5 cents per acre up to 100 acres, of 3 cents per acre from 100 to 1000 acres, and of two cents per acre above 1000 acres. **The annual charge has been eliminated.** The applica-

tion and permit fees are similar to those in force in Nevada, Oregon and Washington (1917)—the permit fees for power purposes being the same as those in Washington, and the permit fees for agricultural purposes being the same as those in Nevada.

The California water commission made the above recommendation regarding change in filing fees as applications for power purposes were discriminated against under the existing system. Applicants for purposes other than power had to pay a filing fee of $10 only—regardless of the size of the proposed project. Irrigation, municipal and similar applications mean a proposed complete depletion (excepting "return waters") of available water supply by the amount to be diverted. Power applications on the contrary contemplate a return of the diverted water for further use below. Section 23, as amended, places the filing fees for irrigation and power purposes on somewhat the same basis.

The annual charge has been eliminated under licenses for the diversion of water for any purpose as no sound argument could be found for its retention. It was probably originally based on the idea that the state owned the water and, therefore, should secure a return on its use. In approving a permit or issuing a license, however, the state gives no guarantee of the water right, and the holder thereof must protect himself if litigation be initiated by riparian owners or prior appropriators. The Supreme Court of California in Palmer v. Railroad Commission (167 Cal. 163, 167) expressed itself as follows on this point:

> The theory that the water of a non-navigable stream in this state is in some sense "public water" has been advanced before. It has been claimed that a diversion of water under the provisions of the Civil Code (secs. 1410 to 1422) constitutes a grant of the water by the state to the appropriator. The idea may have arisen from the statement sometimes made in the decisions that the riparian owner has no right in the corpus of the water (Eddy v. Simpson, 3 Cal. 252, 58 Am. Dec. 408), and that running water cannot be made the subject of private ownership, that the right to use the water of a stream "carries no specific property in the water itself." (Kidd v. Laird, 15 Cal. 179 [76 Am. Dec. 472]). This is far from saying that the property in the water is vested in the public, either for general use, or as property of the state. The doctrine that it is public water, or that it belongs to the state because it is not capable of private ownership, has no support in the statutes of the state or in any decision of this court.

In a petition for rehearing the attention of the Court was directed to the 1911 amendment of Section 1410 of the civil code, adding the words: "All water or the use of water within

the state of California is the property of the people of the state of California." The Court's interpretation follows:

> The amendment may possibly be effective as a dedication to general public use of any riparian rights which the state, at the time it was enacted, may still have retained by virtue of its ownership of lands bordering on a stream, rights in the stream which it would in such cases have in common with owners of other abutting land. It could not affect the riparian rights of the other owners, nor the rights of any person or corporation claiming under them, nor rights previously acquired from riparian owners by prescription, nor rights acquired from the state prior to that time by appropriation under the code, in reliance upon the implied offer of the state to allow its riparian rights to be acquired in that manner, as indicated in the opinion.

No western state, other than California and Oregon, has attempted to levy an annual charge for the appropriation of water. The Oregon statute (1911) applies to all water power plants and not only to new ones as first provided in 1909.

Adjudication of Rights.—The procedure for the adjudication of rights provided in the 1913 act was unsatisfactory and was amended in 1917 to conform to the new Oregon and Nevada procedure—except that the adjudication is specifically restricted to rights by appropriation.

Distribution of Water.—The only provision in the act regarding the distribution of water is Section 37, which is as follows:

> The power to supervise the distribution of water in accordance with the priorities established under this act, when such supervision does not contravene the authority vested in the judiciary of the state, is hereby vested in the state water commission.

In 1917 an act was introduced amending Section 37 so that the system of distribution used in Colorado and other western states might be followed. The act provided that the water masters should be paid by the state, as this recommendation had been made by practically every state engineer in response to inquiries from the California water commission. The matter of distribution was so little understood by the California legislators, however, that the act was not pressed. Many of the opponents of the measure thought it was an attempt to distribute water without first securing an adjudication of the rights. This is probably the only instance where there has been objection to that part of suggested water codes governing distribution of water.

Texas

In 1913, Texas passed legislation creating a board of water engineers consisting of three members, one from each of the three water divisions into which the act divided the state. Under this act the board was authorized to pass upon applications to appropriate in the same general way as is a state engineer in other western states. In 1917, the 1913 act was reenacted and supplemented to include the Wyoming administrative method for determining rights, and the usual system of water masters to distribute water in accordance with decreed rights.

As stated in Chapter II, the riparian doctrine is recognized in Texas. Section 3 of the 1917 act authorizing the diversion of water contains the proviso: "that such ordinary flow and underflow shall not be diverted to the prejudice of the rights of any riparian owner without his consent, except after condemnation thereof in the manner hereinafter provided." Section 83 of the act provides that a permittee who applies the water appropriated to beneficial purposes for **three years** "shall be deemed to have acquired such appropriation by limitation, as against any and all other claimants of water from the same stream * * *, and as against all riparian owners." The benefits of the section also extend to those who appropriated water according to law prior to the passage of the 1917 act.

Section 129, providing for the forfeiture of water rights of those who fail for a three-year period to submit evidence of claim, contains the following:

> **Provided that nothing herein contained shall be held to in any way destroy, infringe or impair the right of any riparian owner to the use of the water from such stream for domestic purposes and use or for the use of stock, and it shall not be necessary for the claimant of this right to appear or assert his right to such use, but the same shall be respected.**

Section 136 is as follows:

> **Nothing in this act shall be construed as a recognition of any riparian right in the owner of any lands the title to which shall have passed out of the state of Texas subsequent to the first day of July, A. D. 1895.**

The date, July 1, 1895, is the effective date of a statute declaring the unappropriated waters, within those portions of Texas in which "irrigation is beneficial for agricultural purposes," to be the property of the public (see references to Crawford v. Hathaway and Hough v. Porter in Chapter II).

Washington

As previously stated, the "Bien Code" was prepared as a result of a joint conference between commissions appointed in Oregon and Washington in 1903-1904 to draft a water code. The act introduced in 1905 as a result of the commission's work failed to pass. Another commission was appointed to draft a bill for introduction in 1913. The bill failed in 1913 and again in 1915, but in amended form passed at the last session, 1917.

The new act provides a "state hydraulic engineer" with authority regarding the initiation of rights and the distribution of water similar to that of other western state engineers—especially Nevada and Utah, as water masters report directly to the state hydraulic engineer. The method of adjudication is also similar to that of Utah—one point of difference being that in Washington the act provides that the state hydraulic engineer, "or his duly authorized deputy," shall be the referee appointed by the court.

The act recommended by the commission placed limitations upon the exercise of riparian rights as in the Oregon code. The limitations, however, were stricken out by the legislature, so that the only mention of riparian rights in the act as adopted is the following from Section 1:

*** * Nothing contained in this act shall be construed to lessen, enlarge or modify the existing rights of any riparian owner, or any existing right acquired by appropriation, or otherwise. They shall, however, be subject to condemnation as provided in section 4 hereof, and the amount and priority thereof may be determined by the procedure set out in sections 14 to 26 inclusive hereof.**

Kansas

In 1917, the Kansas Water Commission was created to investigate "the problems of flood prevention, drainage, domestic water supply, water power, navigation and irrigation in the state of Kansas." The commission is composed of three members—the governor, as ex-officio chairman, and two civil engineers appointed by him to hold office for four years. The appointed members serve without compensation, except actual traveling expenses.

Section 6 of the act creating the commission provides that surface or underground waters of the state may be appropriated "upon application to the commission, and in accordance with rules and regulations it may prescribe." Section 7 provides that "the commission shall study the laws of the state relating to floods, drainage and irrigation with a view of

making such provisions as may be necessary to accomplish the ends prescribed in this act."

Kansas has therefore passed from the "posting notice" stage to that of making applications to a water commission. As the powers given to the commission are very broad regarding new appropriations, it is probable that the commission's recommendation for a well-rounded irrigation code will be accepted by the next legislature.

Review of Legislation

Adjudication of Rights.—In May, 1904, the state engineers of the eight states then having the office formed the Association of State Engineers. The first regular meeting was held at Boise, Idaho, in September, 1904. As a result of a close examination of the provisions of the various statutes, it was then agreed that the only difference of importance was in the method of determining rights, and the same view is held today.

In Wyoming, Nebraska, Nevada (until 1915), and Texas, rights are determined by a state engineer or engineering board, subject to review by the courts on appeal. The method has the advantage of freedom from embarrassing procedure as the officials collect the necessary field data and proofs, and are so familiar with the essentials that the irrelevant is summarily eliminated. The rights are accordingly determined with comparative speed and at low cost.

In Colorado, Idaho, Utah, North Dakota, Oklahoma, South Dakota, New Mexico and Washington, adjudications are made by the courts after the assembling of physical data by the state engineer except in Colorado where the state engineer has no connection with the adjudication. The chief argument of the proponents of this legislation is that no other method is legally sound. It so happens, however, that the board or administrative method has been upheld by the supreme courts of Wyoming and Nebraska, and the court method has been held unconstitutional in Idaho and South Dakota—the only cases in which it has been before the courts (again excepting Colorado).

The constitutionality of the Wyoming statute providing for the new system of defining rights was questioned in Farm Investment Company v. Carpenter (61 Pac. 266) decided May 26, 1900 — after the statute had been in operation ten years. The Supreme Court in upholding the statute made the following pertinent statement regarding the efficiency of the two methods:

As between an investigation in the courts and by the board, it would seem that an administrative board, with experience and peculiar knowledge along this particular line, can, in the first instance, solve the questions involved, with due regard for private and public interests, conduct the requisite investigation, and make the ascertainment of individual rights, with great facility, at less expense to interested parties, and with a larger degree of satisfaction to all concerned.

In the same case it was contended that although the system might be valid for defining rights which had accrued subsequent to the adoption of the constitution, it was certainly invalid for defining rights accruing prior thereto and the Court answered:

It follows from what has already been said that in this regard there exists no difference between claimants whose rights accrued prior to, and those acquiring rights after, the adoption of the constitution and the statute in question.

In Crawford v. Hathaway (93 N. W. 781) the validity of the Nebraska statute was attacked and the Supreme Court said:

The Wyoming statute, from which ours is borrowed, has been subjected to judicial construction and is upheld by the Supreme Court of that state on the express ground that the powers authorized therein are not judicial, but administrative. . . . With this authoritative construction of the statute, and a decision of the very question raised in the case at bar upon reasoning quite convincing and satisfactory, it would seem that the question should be regarded as at rest. The primary object of the board is for the purpose of supervising the appropriation, distribution and diversion of water. This is obviously an administrative rather than a judicial function.

In Bear Lake v. Budge (75 Pac. 614) the Idaho Supreme Court held invalid that part of the 1903 statute providing for the initiation by a water commissioner of suits to determine water rights, in the following words:

Said provision also violates the provision of our statutes which requires suits to be brought in the name of the real party in interest. The water commissioner, a public official, is not the real party in interest in a suit to quiet title or to determine adverse interest in property not claimed by or belonging to him or the state.

In St. Germain Irrigating Co. v. Hawthorne Ditch Co. (143 N. W. 124), the Supreme Court of South Dakota considered that part of the "water code" dealing with the adjudication of water rights. The code provides that "when any such suit has been filed the court shall direct the state engineer to make or furnish a complete hydrographic survey of such stream system" and that the costs of such surveys shall be charged against the parties in proportion to the water right allotted. The court held that such provisions are "void as

tending to deprive individuals of property rights and property, by way of costs and expenses, without due process of law." The section in question is practically the same as Sec. 4620 of the Code of Civil Procedure of Idaho, which has been upheld on the grounds that the constitution does not prohibit the legislature from providing for such surveys and their use as evidence and the prorating of the costs thereof by the trial court. (Boise, etc. Co. v. Stewart, 77 Pac. 25).

The new Oregon method (now followed in Oregon, Nevada and California) is designed to meet the objections of those who contend that only a regular judicial tribunal should establish water rights. As stated above, the 1907 Oregon statute provides for an immediate affirmance or modification of the determination of the board by the circuit court. The provisions of the Oregon act regarding this method of determination have been upheld by the Oregon Supreme Court in Pacific Livestock Company v. Cochran (144 Pac. 668) and In Re Willow Creek (144 Pac. 505), and have likewise been upheld by the U. S. Supreme Court in Pacific Livestock Co. v. Lewis (36 Sup. Ct. Rep., 637). In the last case the Court said, in commenting upon the relation between the proceedings before the board and before the court:

> A serious fault in this contention is that it does not recognize the true relation of the proceeding before the board to that before the court. They are not independent or unrelated, but parts of a single statutory proceeding, the earlier stages of which are before the board and the later stages before the court. In notifying claimants, taking statements of claim, receiving evidence, and making an advisory report, the board merely paves the way for an adjudication by the court of all the rights involved. As the supreme court of the state has said, the board's duties are much like those of a referee. (And see Washington ex rel. Oregon R. & Nav. Co. v. Fairchild, 224 U. S. 510, 526, 527, 56 L. ed. 863, 868, 869, 32 Sup. Ct. Rep. 535.) All the evidence laid before it goes before the court, where it is to be accorded its proper weight and value. That the state, consistently with due process of law, may thus commit the preliminary proceedings to the board and the final hearing and adjudication to the court, is not debatable. And so, the fact that the board acts administratively and that its report is not conclusive does not prevent a claimant from receiving the full benefit of submitting his claim and supporting proof to the board. That he is to do this at his own expense affords no ground for objection; on the contrary, it is in accord with the practice in all administrative and judicial proceedings.

In the recent case of Bergman v. Kearney (24 Fed. 884) the validity of the 1915 Nevada act was attacked on the ground, among others, that certain sections of the statute "are invalid, because thereby they seek to confer upon a non-

judicial officer judicial powers; and by the terms of the statute the district courts of the state are deprived of their original jurisdiction * * *; and that it makes of the district courts appellate courts * * *." In reaching his conclusions in the case, Judge Farrington presents a careful analysis of constitutional and statutory provisions regarding water in Wyoming, Nebraska, Oregon and Nevada, and says:

Under our law, with even more reason than under that of Oregon, Wyoming or Nebraska, may it be said that the proceeding for the adjudication of water rights is integral; it is one; its preparatory and initial stages are before the state engineer; the final steps are in the district court. It is initiated by an order of the state engineer, without waiting for controversies to arise. He seeks no legal or equitable relief, either for himself or for the state which he represents. No recovery of the whole or any part of the rights to be investigated, is demanded. He sets up no title to be established or quieted in himself or in the state; he alleges no rights which have been infringed or violated. The purpose of the proceeding is to promote the public welfare by regulating the use and preventing the waste of the waters of the state. His findings and determination, though they are obtained judicially, have none of the elements of finality and conclusiveness which are the sine qua non of judicial power. As an ascertainment of relative rights, it is not effective for the administrative purpose of regulating and controlling distribution and diversion, until it is filed in court. * * * Until it is so filed, it has no more force than the findings of a referee. It is not a decree or judgment in the sense that it terminates the litigation on the merits between parties; therefore, there is nothing to appeal from. When it reaches the court, there is no necessity for an appeal; there its principal function is to serve as one of the pleadings. * * *

I am therefore of the opinion that the act of 1913, as amended in 1915, in so far as it authorizes the state engineer to take evidence and determine water rights for administrative purposes, is not unconstitutional. The power exercised in the ascertainment of water rights for administrative purposes only, is not judicial power in the constitutional sense; nor in so far as the engineer is authorized to take evidence and determine water rights for the final adjudication of the titles of various claimants among themselves, is he vested with judicial power. What he does is merely preliminary, the initial step in a proceeding which culminates in a final decree by the district court; thus it is not the engineer, but the court, which exercises the judicial power of the state of Nevada.

As viewed from the practical standpoint, the argument is entirely in favor of the administrative board method (including the Oregon method). Excepting Colorado, where the system is clearly defective in that it does not provide for representation by the state, practically nothing has been done in the states adopting statutes providing for the adjudication

by a regular court, after the preparation of physical data by the state engineer. Very decided progress has been made in Nebraska, Nevada, Oregon and Wyoming, where the rights are determined by the board of control or the state engineer, at least in the first instance. Realizing the excellent work accomplished in the states last named, Idaho and Utah in 1915 appointed commissions to recommend new legislation. On account of lack of funds no commission was appointed by the governor of Utah during the period 1915-1916. In 1917, however, an act providing for such a commission and appropriating $18,000 for the expenses thereof was passed, and the commission has been appointed and is now at work.

The Idaho commission in its report (1915) says:

The Commission therefore proposes a plan that, while it is in a measure revolutionary so far as the state of Idaho is concerned, various features of it have been in operation in Wyoming and Oregon and, though severely criticised, apparently are successful there. The plan as proposed by the Commission would effect a change whereby the administration and adjudication of the waters of the state would be placed in the hands of a board composed of the state engineer and two other members appointed by the governor from different irrigated sections of the state.

Acquirement of Rights.—It has been stated that the following states have central offices (state engineer, water commission or water board) to which applications on furnished printed forms must be made by intending appropriators: Wyoming, Nebraska, Idaho, Utah, Nevada, North Dakota, Oklahoma, South Dakota, New Mexico, Oregon, California, Texas, Kansas and Washington. The central office of each of the above states will send an application blank and instructions on request, and every intending appropriator should follow the directions carefully and thus avoid later trouble. To the above list Colorado should be added, as the state engineer issues instructions regarding maps and statements to be filed within sixty days after the commencement of surveys or actual construction of any ditch or reservoir.

There remain but two states, Arizona and Montana, in which the old method of posting notices is still valid. In Arizona, a copy of the notice of appropriation must be recorded in the office of the county recorder of the counties in which the ditch or reservoir lies, and also in the office of the secretary of state. No time limit is specified for the recording of notices, and the work must begin within a reasonable time and be prosecuted with reasonable diligence to completion. In Montana, a verified copy of the notice of appropriation must be filed in the office of the county clerk of the county where

posted within twenty days, and work must begin within forty days. In case of appropriation from adjudicated streams, the new appropriator, within forty days after completion, makes application to the clerk of the district court, who orders an examination by a competent engineer. A hearing, after published notice, is held, and the court limits the appropriation in accordance with its findings. This procedure was adopted in 1907. Montana has had a state engineer since 1903, but his duties are confined mainly to operations under the Carey act and to state highway work. It is gratifying to note that in both Arizona and Montana comprehensive "water codes" were introduced in 1917. It is certain that, on account of the campaign of education now being waged in the two states, the chances of passage at the 1919 session are very good.

Following the early California cases and prior to the introduction of the new legislation, it was the accepted rule that a valid appropriation of water could be made without following the statutes providing for the posting of notices of appropriation. Except in Idaho, the new legislation aims to make the statutory method exclusive—the diversion of water except by virtue of an approved application being generally declared unlawful. The question has been raised before the Supreme Court of Idaho only. In a number of cases, of which the last is Crane Falls Power & Irrigation Co. v. Snake River Irrigation Co. (133 Pac. 655), the Supreme Court of Idaho has held that the old rule still applies, and that an appropriation may be made by actual diversion without applying to the state engineer for a permit. By following the statute the benefits of the doctrine of relation are secured, and the priority of the right is fixed as of the date of the filing of the application. When the statute is not followed, the priority dates from the application of the water to beneficial use — the statutory method being the exclusive method by which the right can relate back to the filing of the application. As a practical matter, therefore, no project of any size will be undertaken except under permit from the state engineer. Not only would it be impossible to finance a project with no evidence of water right, but no rights of way over government land can be secured without such. As the constitution of Idaho provides that the right to appropriate shall never be denied, the Idaho cases cannot be considered a precedent in the other states having the new legislation.

Except as indicated under the discussion of the Utah laws, the new legislation authorizes the central offices to reject an application which is deemed detrimental to the public welfare.

As previously stated, this provision was held unconstitutional by a district court in Utah, but it has been upheld by the Supreme Courts of New Mexico and Oregon (Young v. Hinderlider—New Mexico—110 Pac. 1050; Cookinham v. Lewis—Oregon—114 Pac. 90, 115 Pac. 343).

The new legislation generally provides that the central office may cancel a permit under which work is not being prosecuted in accordance with the conditions thereof. A very comprehensive statute covering this point was adopted in Idaho in 1909. Its validity was questioned in Speer v. Stephenson (102 Pac. 366) on the ground that it confers judicial power upon the state engineer, and that the procedure prescribed is not due process of law. The Court held that "the granting as well as the cancellation and voiding of permits are acts of administration and clearly within the power which may be given to the state engineer in supervising and administering a law regulating the appropriation of the public waters." The sufficiency of the procedure was also upheld.

The rule was early established that an appropriator may change the place or means of diversion, the place of use and purpose of use, without loss of priority, provided no other claimant is injured thereby. As the matter of injury is one of fact to be determined in a given case, the new legislation in a number of the states provides a procedure to be followed after application to the state engineer for permission to make such change. In Pueblo of Isleta v. Tondee (137 Pac. 86) the Supreme Court of New Mexico held, with reference to the sections of the 1907 New Mexico statute providing for such changes, that the provision applies only to appropriations initiated under the 1907 act, and not to those existing at the date of its passage. Mr. Chief Justice Roberts dissented, holding that all appropriations are subject to the sections construed, and his opinion seems to be supported by both the administrative practice and by the courts in other states having such legislation.

Water rights initiated by application to the state engineer are based upon beneficial use and perpetual unless abandoned or forfeited through non-use—as was the case prior to the adoption of the new legislation. Oregon (1909) and California (1911) formerly restricted new appropriations for power purposes to a term of forty years, but such statutes are no longer effective, having been repealed in Oregon in 1915 and in California in 1913.

Distribution of Water.—Every western state, with the exception of Arizona, Kansas and Montana, has now adopted

a system of distribution of water in accordance with determined or decreed rights, following the method first introduced by Colorado—the California statute on this point, however, must be supplemented. The title, incidental duties, method of appointment and payment of the "police officers" involved in the distribution of water differ in the various states, but the underlying principle is the same. The general method of having the "police officers" paid by the counties has been severely criticized by the central offices, but, as previously stated, the only state which has thus far authorized the payment of such "police officers" from state funds is Nebraska. So necessary, and in fact indispensable, is a public system of distribution after rights have been defined or decreed, that many judges have taken it upon themselves to insist upon the appointment of commissioners to divide the waters in accordance with decrees. The Supreme Court of the United States, in passing upon an Arizona case in which the lower court had ruled that the parties to a suit should share the payment of the salary of the commissioner appointed by the court to distribute the water, approved such action "in view of the absence of legislative action on the subject and of the necessity which manifestly existed for supervising the use of the stream. * * " (Montezuma Canal Co. v. Smithville Canal Co., 218 U. S. 371.)

Conclusion.—It should be emphasized in closing that the "new legislation" which has been discussed is dictated solely by good business sense. Instead of endless litigation regarding existing rights and no system worth considering regulating new appropriations, the new plan provides a full determination of existing rights in a single proceeding, the proper distribution of water by state officials according to such determination, and a complete control of the acquirement of new rights by a central office. It rests upon the same legal basis as the old, and in no way attempts to interfere with or limit vested rights. It is applicable to any condition of topography or climate, as is illustrated by its acceptance by Nebraska in the east and Oregon in the west, by North Dakota in the north and Texas in the south. It leads the way from chaos and strife to order, harmony, and efficiency.

CHAPTER VII

WATER RIGHTS ON INTERSTATE STREAMS

The principles of either the doctrine of riparian rights or of that of prior appropriation have been thus far considered as developed within the various western states and no mention has been made of the right to use the waters of interstate streams. A little consideration only is necessary to recall to one the great number of rivers which either flow from state to state, or form the boundary line between them. The Snake from its headwaters in the mountain lakes of Wyoming meanders across Idaho, crosses and re-crosses the Idaho-Oregon boundary line, flows through southeastern Washington and finally joins the Columbia, which is the boundary between Washington and Oregon. The tributaries of the Missouri rise in Wyoming and the main stream flows through or touches Montana, North Dakota, South Dakota, Nebraska and Kansas. The principal tributaries of the Colorado, the Green and the Grand, rise in Wyoming, and after their confluence in Utah the main river flows into Arizona and becomes the boundary between Nevada and Arizona, and also between California and Arizona. The Rio Grande rises in Colorado and flows through New Mexico into Texas.

The waters of all of the great rivers mentioned are used to some extent in irrigation, but with the exception of the Rio Grande, and possibly the lower Colorado, there is no likelihood of trouble in the near future between states regarding their use. The interstate streams which have been in controversy are the small mountain tributaries whose small flow was early appropriated. On such streams it is very common to find ditches heading in the upper state and irrigating lands in both the upper and lower states. Willey v. Decker (73 Pac. 210) dealt with Young's Creek flowing from Montana into Wyoming and back again into Montana, and the Supreme Court of Wyoming therein held (as reported in a head note):

In the absence of statutory provisions, owners of land in Montana may acquire a legal right by prior appropriation to the use of the waters of a stream having its source in that state, and flowing thence . . . in Wyoming, by joining with owners of land in Wyoming in the construction of a ditch, and thereby diverting the waters of the stream at a point within Wyoming for the irrigation of lands in Montana and Wyoming.

Sage Creek is another small stream rising in Montana and flowing into Wyoming. In Howell v. Johnson (89 Fed. 556) the defendants contended that the plaintiff, having a water right under the laws of Wyoming, could not have a federal court enforce the same, and also that the rights to water were under the control of the legislature of Montana. The court, however, applied the doctrine of appropriation regardless of state lines and held for the plaintiff—diverting in the lower state, Wyoming. The lower prior diversion was likewise protected in Hoge v. Eaton (135 Fed. 411) wherein appropriators from Sand Creek in Wyoming complained of a later diversion of the creek in Colorado. The Court therein said:

The right to divert running waters for irrigating lands in an arid country is not controlled or affected by political divisions. It is the same in all states through which the streams so diverted may pass.

The waters of Sage Creek were again in controversy in Bean v. Morris which was decided by the United States Supreme Court May 29, 1911 (221 U. S. 485). The Supreme Court therein said:

But with regard to such rights as came into question in the older states, we believe that it always was assumed, in the absence of legislation to the contrary, that the states were willing to ignore boundaries, and allowed the same rights to be acquired from outside the state that could be acquired from within. . . . There is even stronger reason for the same assumption here. Montana cannot be presumed to be intent on suicide, and there are as many if not more cases in which it would lose as there are in which it would gain, if it invoked a trial of strength with its neighbors. In this very instance, as has been said, the Big Horn, after it has received the waters of Sage Creek, flows back into that state. But this is the least consideration. The doctrine of appropriation has prevailed in these regions probably from the first moment that they knew of any law, and has continued since they became territory of the United States. It was recognized by the statutes of the United States, while Montana and Wyoming were such territory, . . . and is recognized by both states now. Before the state lines were drawn, of course, the principle prevailed between the lands that were destined to be thus artificially divided. Indeed, Morris had made the appropriation before either state was admitted to the Union. The only reasonable presumption is that the states, upon their incorporation, continued the system that

had prevailed theretofore, and made no changes other than those necessarily implied or expressed.

The cases thus far referred to did not raise the doctrine of riparian rights, although it has not been definitely abrogated in Montana. The conflict of doctrines was before the United States Circuit Court in Anderson v. Bassman (140 Fed. 10), wherein the plaintiffs were farmers using the waters of the West Carson River in Nevada and the defendants were irrigators from the same stream in California. In the decision Judge Morrow points out that the doctrine of appropriation is alone recognized in Nevada, while California uses the dual system of appropriation and riparian rights. On account of the conflict of accepted systems no attempt was made to ascertain individual rights of priority, but the case was decided by allowing the farmers in California the use of the entire stream for five days out of ten and a like use to those in Nevada.

Kansas v. Colorado

By far the most important case dealing with the use of the waters of an interstate stream is Kansas v. Colorado (206 U. S. 91) decided by the United States Supreme Court May 13, 1907. It was initiated on May 20, 1901, by Kansas charging Colorado with the wrongful diversion of the waters of the Arkansas River. On May 21, 1904, the United States intervened in behalf of its operations under the Reclamation Act of June 17, 1902.

Kansas claimed that the waters of the Arkansas should be allowed to flow as they were accustomed to flow, and that by the diversions in Colorado not only were the property owners along the river deprived of its surface flow, but all land owners within the drainage area were deprived of the beneficial influence of the subterranean flow.

Colorado contended that under the provisions of its constitution it is the owner of all waters within its borders. It further contended that the Arkansas River is substantially two rivers—the Colorado Arkansas rising in the Rocky Mountains and sinking, in times of low water, in the sands of Western Kansas, and the Kansas Arkansas which is formed by springs and surface drainage in Western Kansas east of the sink of the Colorado Arkansas.

The United States in its petition in intervention set forth the vast acreage of public lands to be reclaimed under the provisions of the Reclamation Act, the reliance of the arid west upon the doctrine of prior appropriation, the inapplicability of the riparian doctrine where irrigation is necessary, the contention of Kansas that it is entitled to have the waters of the

Arkansas flow uninterrupted and unimpeded into Kansas, the contention of Colorado that it is the owner of all waters within the State, and closed with the following:

> That neither the contention of the state of Colorado nor the contention of the state of Kansas is correct; nor does either contention accord with the doctrine prevailing in the arid region in respect to the waters of natural streams and of flood and other waters. That either contention, if sustained, would defeat the object, intent, and purpose of the reclamation act, prevent the settlement and sale of the arid lands belonging to the United States, and especially those within the watershed of the Arkansas River west of the ninety-ninth degree west longitude, and would otherwise work great damage to the interests of the United States.

Mr. Justice Brewer, who wrote the opinion, after showing that the case is one over which the Supreme Court has jurisdiction, said:

> Turning now to the controversy as here presented, it is whether Kansas has a right to the continuous flow of the waters of the Arkansas River, as that flow existed before any human interference therewith, or Colorado the right to appropriate the waters of that stream so as to prevent that continuous flow, or that the amount of the flow is subject to the superior authority and supervisory control of the United States. . . . Is the question one solely between the states or is the matter subject to national legislative regulation, and, if the latter, to what extent has that regulation been carried? . . . The primary question is, of course, of national control.

The power of congress to preserve the navigability of streams is first examined with the conclusion:

> It follows from this that if in the present case the national government was asserting, as against either Kansas or Colorado, that the appropriation for the purposes of irrigation of the waters of the Arkansas was affecting the navigability of the stream, it would become our duty to determine the truth of the charge. But the government makes no such contention. On the contrary, it distinctly asserts that the Arkansas River is not now and never was practically navigable beyond Fort Gibson in the Indian Territory, and nowhere claims that any appropriation of the waters by Kansas or Colorado affects its navigability.

The Court then proceeds to examine "the question whether the reclamation of arid lands is one of the powers granted to the general government", pays particular attention to that part of section three of article four of the constitution reading: "The congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States . . . . .", and concludes that the section grants to congress no legislative control over the states, but gives it author-

ity over federal property within their limits. It is stated that the constitution is silent regarding the reclamation of arid lands as no such problem existed at the time of its adoption, that with the extension of national territory large areas of arid lands have been included, and that "it may well be that no power is adequate for their reclamation other than that of the national government. But if no such power has been granted, none can be exercised."

It is the last sentence quoted which has led many to believe that the Supreme Court in this case declared the Reclamation Act unconstitutional. The validity of that Act, however, was not in issue, but the question of national control—that is, the superior right of congress to legislate regarding the reclamation of arid lands—was. This should be clear from the following quotation which is from the paragraph immediately following the sentence referred to:

> It does not follow from this that the national government is entirely powerless in respect to this matter. These arid lands are largely within the territories, and over them by virtue of the second paragraph of section three of article four heretofore quoted, or by virtue of the power vested in the national government to acquire territory by treaties, congress has full power of legislation, subject to no restrictions other than those expressly named in the constitution, and, therefore, it may legislate in respect to all arid lands within their limits. As to those lands within the limits of the states, at least of the western states, the national government is the most considerable owner and has power to dispose of and make all needful rules and regulations respecting its property. We do not mean that its legislation can override state laws in respect to the general subject of reclamation. While arid lands are to be found, mainly if not only in the western and newer states, yet the powers of the national government within the limits of those states are the same (no greater and no less) than those within the limits of the original thirteen, and it would be strange if, in the absence of a definite grant of power, the national government could enter the territory of the states along the Atlantic and legislate in respect to improving by irrigation or otherwise the lands within their borders. Nor do we understand that hitherto congress has acted in disregard to this limitation.

After quoting from Gutierres v. Albuquerque Land Company (188 U. S. 545) the Court continues:

> But it is useless to pursue the inquiry further in this direction. It is enough for the purposes of this case that each state has full jurisdiction over the lands within its borders, including the beds of streams and other waters. . . . It may determine for itself whether the common law rule in respect to riparian rights or that doctrine which obtains in the arid regions of the west of the appropriation of waters for the purposes of irrigation shall control. **Congress cannot enforce either rule upon any state.**

It is certain from the above that the state and not the nation is superior regarding legislation concerning the use of public waters not navigable. As stated, the Supreme Court believed it to be the "primary question" involved in the case and, after such careful and direct consideration, the decision must be accepted as final.

Coming to the direct issue between the two states, it is held that the dispute must be so adjusted "upon the basis of equality of rights as to secure as far as possible to Colorado the benefits of irrigation without depriving Kansas of the like beneficial effects of a flowing stream". Tables are set forth in the opinion showing the increase in population, acreage irrigated, and value of farm products in the counties of eastern Colorado traversed by the Arkansas River. The court comments on the marked development thus evidenced and says that, as shown by the testimony, it is undoubtedly due to irrigation. A like examination is made of the census statistics for the counties of western Kansas with the conclusion that the use of the water in Colorado has not been of serious detriment to such counties.

The substance of the decision is well presented in the following paragraphs:

Summing up our conclusions, we are of the opinion that the contention of Colorado of two streams cannot be sustained; that the appropriation of the waters of the Arkansas by Colorado, for purposes of irrigation, has diminished the flow of water into the state of Kansas; that the result of that appropriation has been the reclamation of large areas in Colorado, transforming thousands of acres into fertile fields and rendering possible their occupation and cultivation when otherwise they would have continued barren and unoccupied; that while the influence of such diminution has been of perceptible injury to portions of the Arkansas Valley in Kansas, particularly those portions closest to the Colorado line, yet to the great body of the valley it has worked little, if any, detriment, and regarding the interests of both states and the right of each to receive benefit through irrigation and in any other manner from the waters of this stream, we are not satisfied that Kansas has made out a case entitling it to a decree. At the same time it is obvious that if the depletion of the waters of the river by Colorado continues to increase there will come a time when Kansas may justly say that there is no longer an equitable division of benefits and may rightfully call for relief against the action of Colorado, its corporations and citizens in appropriating the waters of the Arkansas for irrigation purposes.

The decree which, therefore, will be entered will be one dismissing the petition of the intervenor, without prejudice to the rights of the United States to take such action as it shall deem necessary to preserve or improve the navigability of the Arkansas River. The

decree will also dismiss the bill of the state of Kansas as against all the defendants, without prejudice to the right of the plaintiff to institute new proceedings whenever it shall appear that through a material increase in the depletion of the waters of the Arkansas by Colorado, its corporations or citizens, the substantial interests of Kansas are being injured to the extent of destroying the equitable apportionment of benefits between the two states resulting from the flow of the river.

It must be emphasized that the Supreme Court in its decree did not attempt to make an equal division of the waters of the stream, but rather an equitable apportionment of benefits. Neither the rule of prior appropriation nor that of riparian ownership is followed, but the case is allowed to rest on the "cardinal rule of equality of right"—not to the means but to the results.

Legislation Regarding Interstate Streams

Interstate complications over the use of water must have been very much in the legislative mind in 1911. In that year California enacted legislation making it unlawful to transport the waters of any lake or stream of the state "into any other state, for use therein"; Colorado authorized a joint legislative committee to investigate the interference by the federal government or any state, corporation or individual with the control by Colorado of the waters within its borders; and Wyoming authorized its attorney general, under the direction of the governor, to bring such actions "as he may deem expedient to maintain the rights of the state and its citizens in the waters of interstate streams." Oregon was the only state in which the spirit of reciprocity was visible. There, by the act of February 23, 1911, it was provided that no permit for the appropriation of water shall be denied because the point of diversion, or any portion of the works, or the place of intended use, or any lands to be irrigated may be situated in some other state; "provided, however, that the state engineer may in his discretion, decline to issue a permit where the point of diversion described in the application is within the State of Oregon but the place of beneficial use in some other state, unless under the laws of such state water may be lawfully diverted within such state for beneficial use in the State of Oregon."

The constitutionality of the 1911 Colorado statute was questioned in Stockman v. Leddy (129 Pac. 220) which was brought to compel the Auditor of Colorado, Leddy, to issue a warrant for services rendered the legislative committee created by the statute. The constitution of Colorado provides: "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." Although the Supreme Court was obliged to hold the statute invalid as it conferred "purely executive power upon a collection of members of the legislative department", it said that the general purpose of the act "is not only praiseworthy, but strictly within the legislative field." In support of the last statement it said:

> The state has never relinquished its right of ownership and claim to the waters of our natural streams, though it has granted to its citizens, upon prescribed conditions, the right to the use of such waters for beneficial purposes and within its own boundaries. The property right, however, in the natural streams, and the waters flowing therein, has never been renounced or relinquished by the state, and it has at all times asserted not only its right of ownership, but the unrestrained right, within its own boundaries, to distribute its waters to those who have, under its authority, acquired, by perfected appropriations, the right to their use. * * *
>
> The federal government, by its lawmaking and executive bodies, knew that the natural streams of this state are, in fact, nonnavigable within its territorial limits, and practically all of them have their sources within its own boundaries, and that no stream of any importance whose source is without those boundaries, flows into or through this state. The entire volume of these streams is therefore made up of rains and snows that fall upon the surface of lands included within the exterior lines of this state and of springs which issue from the earth within the same area. Such being the peculiar conditions, the state was justified in asserting its ownership of all the natural streams within its boundaries.

In accordance with the 1911 act, Wyoming has brought suit in the United States Supreme Court against Colorado and two individual defendants regarding the diversion in Colorado of waters of the Laramie River, which flows from Colorado into Wyoming. On March 6, 1917, the Supreme Court ordered that the case be restored to the docket for reargument. (State of Wyoming v. State of Colorado, 37 Sup. Ct. Rep. 379.) Wyoming is contending for the application of the principle of prior appropriation regardless of state lines, while Colorado insists upon being allowed to use all of the waters within its boundaries regardless of priority. On account of the great interest of the United States Reclamation Service in the questions presented, the Attorney General of the United States will undoubtedly be represented in the reargument. The case differs from Kansas v. Colorado in that

both Wyoming and Colorado have abrogated the doctrine of riparian rights, which is in force in Kansas.

Walbridge v. Robinson, State Engineer (125 Pac. 812) was brought to compel the state engineer of Idaho to issue a certificate of completion of diversion works from Bear Creek, an Idaho stream (not an interstate stream), to lands in Montana. In holding that the state engineer was not authorized to issue the certificate, the Court said:

> There is no doubt in our minds but that the state in its sovereign capacity is the owner of the waters flowing in the stream thereof and may exercise its authority over the same. If the foregoing propositions be correct, the state has the right to prohibit the diversion of the waters of its streams for use outside of and beyond the boundaries of the state.

The above case was decided July 3, 1912. In 1915, Idaho passed a statute, similar to the 1911 Oregon statute, authorizing the state engineer to issue permits for the diversion of Idaho waters for use in another state, provided such state has legislation "whereby water may be appropriated within such sister state for use within the state of Idaho." Two years previously, in 1913, Nevada passed a statute of the same reciprocal import. California, in 1917, repealed its prohibitory measure of 1911, and added a new section, 15a, to the water commission act, as follows:

> The state water commission shall allow the appropriation of water in this state for beneficial use in another state only when, under the laws of the latter, water may be lawfully diverted therein for beneficial use in the state of California. Upon any stream flowing across the state boundary a right of appropriation having the point of diversion and the place of use in another state and recognized by the laws of that state, shall have the same force and effect as if the point of diversion and place of use were in this state; provided, that the laws of that state give like force and effect to similar rights acquired in this state; provided, that nothing in this act be so construed as to apply to interstate lakes, or streams flowing in or out of such lakes.

That Utah may be counted upon to join Oregon, Nevada, Idaho and California in the near future is evident from the following extract from the biennial report of the State Engineer of Utah for 1913-1914 (Pg. 32), and the added fact that a water commission is now at work on recommendations for new legislation:

> Under the existing laws the state engineer cannot consider an application on an interstate stream which contemplates the appropriation of water within this state to be used beneficially in an adjoining state. There are several interstate streams in Utah, and in most of them the water naturally flows into an adjoining state. Under the present law, the state engineer, by having to refuse to accept such

applications, may at times block a really meritorious scheme of development. During the past two years several applications of this nature have been submitted, notably on Bear River, but, on advice of the attorney general, they were not accepted, for the reason that the present law gives the state engineer no authority over such applications. I think that this matter should be taken up with the adjoining states with a view of securing uniform legislation covering this class of appropriations. The allowing of applications of this nature should, however, rest with the state engineer. He should have authority to investigate the scheme proposed by such an application, and if found to be meritorious and its granting will in no way be detrimental to the state, nor deprive the state of a water supply that can be economically and beneficially used on land within this state, the application should be granted.

Legislation similar to that of Oregon, Nevada, Idaho and California should be enacted by all the states where rights are initiated by an application to the state engineer. Cases are constantly arising where applications are made for proposed systems lying partly within two states. Without definite legislation the state engineer has no guide to action—some engineers have approved such applications, others have rejected them. In New Mexico the territorial engineer approved an application for the irrigation of lands in New Mexico by a ditch heading in the Animas River in Colorado about six miles above the interstate line. The matter reached the courts and the Supreme Court of New Mexico decided that "the territorial engineer was without authority to approve the application in question." (Turley v. Furman, 114 Pac. 278.)

Not only is legislation necessary in regard to the initiation of rights for interstate ditches in order to protect the one so appropriating water, but it is badly needed in the interest of the general public in dividing the public waters among ditches entitled thereto. At present, the only means provided by statute for distributing the waters of streams is the authority given the water commissioners, or water masters, to close, or partly close, headgates so that the later and upper ditches cannot take the waters belonging to prior appropriators. As such officers cannot act beyond the borders of their state, they are powerless to control a ditch heading above their state line. The state engineer of Nebraska reports that one ditch diverting water from the North Platte in Nebraska near the state line was extended so that it headed in Wyoming about two hundred feet above the state line. It thereupon proceeded to take all the water desired while the ditches heading below in Nebraska and having earlier rights had their supply

regulated, and in some cases entirely cut off, by the state officials in charge.

To remedy this condition the state engineer of Nebraska has recommended "that every canal flowing into this state have a controlling gate and measuring flume just within the state and in addition thereto a return canal whereby the water sought to be appropriated may flow back to the stream from which diverted." Other state engineers have made similar suggestions. In many cases the construction of a "return canal" would necessitate heavy expenditures and appear prohibitive, but the situation on many streams is sufficiently serious to warrant drastic action.

In 1917, Colorado passed a statute, similar to the 1911 California statute, making it unlawful to divert Colorado waters to another state for use therein. The 1911 California statute was copied from a statute adopted in New Jersey in 1905. The constitutionality of the latter was upheld by the United States Supreme Court in Hudson Water Company v. McCarter (209 U. S. 349). It is specifically stated in the opinion therein, however, that "The problems of irrigation have no place here . . . .", so the decision will not necessarily control in attacks upon the validity of such statutes in the western states. In further support of their validity it is important to note that most of the earlier decisions regarding rights on interstate streams lay down the rule of prior appropriation regardless of state lines in the absence of statutory provisions to the contrary. The argument against such prohibitive legislation must be based on reasons of policy rather than those of law. As suggested in the quotation from Bean v. Morris above, each state stands to lose just as much as it can gain by such statutes — although, as stated above in Stockman v. Leddy, Colorado believes that it stands to lose only.

Summary.—From a consideration of the cases dealing with interstate streams (the leading ones only being mentioned above), the following conclusions are justified. The state and not the nation is superior regarding legislation concerning the use of public waters, excepting only the matter of navigation, wherein the nation controls. Between private appropriators in two states recognizing only the doctrine of prior appropriation, it is very probable that that doctrine will be applied regardless of state lines. Between private appropriators in two states, one or both of which recognize the doctrine of riparian rights, the priority of appropriations will not be established, but the waters will be distributed on an

attempted equitable basis suggested by the particular facts of the case. In a controversy between two states in their sovereign capacities the principle established in Kansas v. Colorado will undoubtedly be applied and the Supreme Court will decide in accordance with what the facts of the case indicate to be an equitable apportionment of benefits. Legislation forbidding the diversion of waters from within a state to another state is probably legally sound but is based upon such short-sighted policy that it cannot prevail.

CHAPTER VIII

RIGHTS OF WAY OVER PUBLIC LANDS FOR DITCHES AND RESERVOIRS

As stated in the first chapter, the first congressional legislation regarding rights of way over the public domain was the Act of 1866, now Section 2339 of the Revised Statutes of the United States. It acknowledges and confirms rights of way for ditches used in connection with "vested and accrued" water rights for "mining, agricultural, manufacturing, or other purposes". It is still in force for all unreserved public lands for purposes other than the generation of power.

By virtue of the provisions of the Act of 1866, one may go upon the public domain, dig his ditch, divert and apply water to beneficial use, and thus secure right of way over the land occupied. As the act recognizes only rights of way for ditches used in connection with **vested** water rights, it has been argued that no right of way attaches until the completion of the works so that the water can be diverted. The California Court of Appeals has held otherwise, however, in de Wolfskill v. Smith (5 Cal. App. 175). The plaintiff had posted notices of water appropriation at abandoned oil wells, on unoccupied public land, from which water was flowing. She proceeded with her ditch construction with due diligence until enjoined by the defendant Smith, who had made homestead entry on the land soon after the notices were posted. Although the court points out that the posting of a notice "does not constitute an appropriation" and that the "right to water depends upon . . . making an actual appropriation of its use", it holds:

> By posting the notice appellant (plaintiff) from that time became vested with the right to the use of the stream of water then flowing from these wells, together with the right to construct over and across the land the necessary ditches to divert and conduct the same to the place of intended use.

In Lynch v. Lower Yakima Irrigation Co. (131 Pac. 389), the Supreme Court of Washington has held that Section 2339 gives the right to continued possession, even though the ditch had not been completed when the land to be occupied by the ditch was entered. It is, therefore, in accord with the deWolfskill case.

It is certain that as against the government the water right is not considered vested until the diversion works are completed and ready for use. Under the provisions of the Reclamation Act the public lands within a reservoir site, known as Alkali Lake, in Antelope Valley, California, were withdrawn from entry. The Rickey Land and Cattle Company owned all the private land within the site and also irrigation ditches running from the West Walker River to the site, which it intended to use for storage purposes. It applied for right of way over the public land within the reservoir site under the Act of 1891, and, after the rejection of its application by the Secretary of the Interior, it proceeded with the construction of a tunnel outlet, claiming that its rights were vested under the Act of 1866. The government, in the interest of the Reclamation Service, thereupon instituted suit and the company was enjoined from prosecuting the construction work. (U. S. v. Rickey Land & Cattle Company, 164 Fed. 496.) In this case it was impossible to use the reservoir before the completion of an outlet tunnel and channel for the return of the stored waters to the West Walker River. After quoting Sections 2339 and 2340 of the Revised Statutes, the Court says:

> It is very clear that no one can under these sections acquire as against the government, a vested easement in and to public lands, for a reservoir site, until the actual completion of the reservoir, so that the waters to be impounded therein may be applied to the beneficial uses, contemplated by the irrigation system of which it forms a part.
>
> This was the construction placed upon these sections by the Supreme Court, in Bear Lake Irrigation Company vs. Garland, 164 U.S., pages 1, 18 and 19, in which case it was said:
>
> It is the doing of the work, the completion of the well, or the digging of the ditch, within a reasonable time from the taking of possession, that gives the right to use the water in the well or the right of way for the ditches or the canal upon or through the public land. Until the completion of this work, or, in other words, until the performance of the condition upon which the right to forever maintain possession is based, the person taking possession has no title, legal or equitable, as against the government.

Regardless, therefore, of the California and Washington cases, no one planning any material diversion work should rest upon the Act of 1866, but should secure his right of way,

or permission to occupy public lands, before initiating actual work.

Act of March 3, 1891: The Act of March 3, 1891, grants rights of way over public lands and reservations for irrigation ditches and reservoirs upon the approval of applications by the Secretary of the Interior. Such applications must be filed with the registrar of the land district in which the ditch or reservoir is to be located. The required contents of papers and maps forming the application are specified in detail in the regulations of the General Land Office, and the applicant must follow the directions to the letter. (Copies of the regulations will be sent on request to the General Land Office, Washington, D. C.) The right of way granted extends, where necessary for construction or maintenance, "fifty feet on each side of the marginal limits" of the ditch or reservoir, and the term "marginal limits" has been construed to mean the high water line. The right is also given to take from the adjacent public land material, earth and stone necessary for the construction work, but it has been held that this right is for construction work only and not for repairs or improvements.

The act specifically provides that "the privilege herein granted shall not be construed to interfere with the control of water for irrigation and other purposes under authority of the respective states and territories." The land office accordingly does not attempt to regulate appropriations of public waters, but simply insists upon a showing by the applicant that the state or territorial laws governing water rights have been complied with.

The act further provides that if any part of the ditch shall not be completed within five years after its location, the right of way for such part shall be forfeited. Regarding such forfeitures, the Secretary of the Interior has held that the jurisdiction of the Interior Department is lost upon the approval of an application, and any action looking to the cancellation or annulment of the right of way must be brought in the courts. The regulations call for the filing of affidavits on the completion of the ditch or reservoir. If the line of the right of way as granted has been departed from, new maps and field notes must be filed and the right to the original but unused line relinquished.

The act also provides "that no such right of way shall be so located, as to interfere with the proper occupation by the government of any such reservation, and all maps of location shall be subject to the approval of the department of the government having jurisdiction of such reservation." Under

this provision the Forest Service has prepared special regulations governing rights of way through the national forests. No construction work in a national forest will be allowed on such rights of way until the application has been approved by the Secretary of the Interior, or unless permission for such work has been specifically given, and as a condition precedent to such approval the applicant must enter into such stipulation and execute such bond as the Forest Service may require. For ditches and reservoirs occupying part of government reservation other than national forests, no application for right of way will be approved by the Secretary of the Interior until it has been approved by the department in charge. If the right of way is upon unsurveyed lands, the map must be filed within twelve months after the official survey thereof, and no application for such right of way can be approved prior to the official survey.

The following paragraph from the regulations clearly states the nature of the grant of right of way under the act of 1891:

The right granted is not in the nature of a grant of lands, but is a base or qualified fee. The possession and right of use of the lands are given for the purposes contemplated by law, but a reversionary interest remains in the United States, to be conveyed by it to the person to whom the land may be patented whose rights will be subject to those of the grantee of the right of way. All persons settling on a tract of public land, to part of which right of way has attached for a canal, ditch, or reservoir, take the land subject to such right of way, and at the total area of the subdivision entered, there being no authority to make deduction in such cases. If a settler has a valid claim to land existing at the date of the filing of the map of definite location, his right is superior, and he is entitled to such a reasonable measure of damages for right of way as may be determined upon by agreement or in the courts, the question being one that does not fall within the jurisdiction of this Department. Section 21 of the act of March 3, 1891, provides that the grant of a right of way for a canal, ditch, or reservoir does not necessarily carry with it a right to the use of land 50 feet on each side, but only such land may be used as is necessary for construction, maintenance, and care of the canal, ditch, or reservoir. The width is not specified.

Act of May 11, 1898: The Act of May 11, 1898, authorizes the use of rights of way granted under the Act of 1891 for purposes subsidiary to the main purpose of irrigation, as is shown by the following clause from section two of the act:

And said rights of way may be used for purposes of water transportation, for domestic purposes, or for the development of power, as subsidiary to the main purpose of irrigation.

In all cases the applicant must prove to the satisfaction of the Interior Department that the intended use, other than irrigation, is really subsidiary thereto, and the proof must be especially clear where the development of power is contemplated.

Act of February 1, 1905: Section four of the Act of February 1, 1905, authorizes the Secretary of the Interior to grant rights of way through national forests to citizens and corporations of the United States "for municipal or mining purposes and for the purposes of milling and reduction of ores." The nature of the grant is the same as that under the Act of March 3, 1891, except that no right is given to take any material, earth, or stone for construction or other purposes, and that the right of way is restricted to the strip necessary for the construction and maintenance of the works. Applications are made in the same way as those under the Act of 1891.

Act of February 15, 1901: Although other uses are specified in this act, it is now of importance only in regard to rights of way through the public lands and reservations for reservoirs and canals for the generation of electric power, and for electric transmission, telephone and telegraph lines. It is provided in the act that any permission given thereunder may be revoked by the Secretary of the Interior in his discretion. The right granted is a mere license, revocable at any time, and does not carry with it permission to take material, earth, or stone from the public lands or reservations for construction or other purposes.

The Act of February 1, 1905, transferred the administrative control of the national forests from the Interior Department to the Department of Agriculture, so that the latter department has jurisdiction over all applications under the act of February 15, 1901, for permission to occupy lands in national forests. Public lands of the United States chiefly valuable for power purposes may be withdrawn from settlement or entry and reserved for power purposes under the withdrawal act of June 25, 1910, as amended by act of August 24, 1912, or under Sections 13 and 14 of the omnibus Indian Act of June 25, 1910.

Comments on Departmental Regulations—Act of Feb. 15, 1901

The most recent regulations governing applications under the act of 1901 are those of the Agricultural Department, issued December 14, 1915, and those of the Department of the Interior, approved March 1, 1913. The regulations of the two departments are practically the same and permit the

right of occupancy for a period of fifty years, "unless sooner revoked by the Secretary".

Under the regulations, preliminary power permits are issued for the purpose of securing the data required for an application for final permit. Final power permits allow the occupancy of the lands for the purpose of constructing, maintaining and operating power plants. Applications for permits to occupy lands other than national forest lands are made to the local land office of the land district in which the lands are situated. Applications for permits to occupy national forest lands are made to the district forester of the district in which the lands are situated.

In issuing final power permits a date is fixed for the beginning and for the completion of construction work. In some of the western states, notably California and Oregon, there is a co-operative agreement between the state engineer (or water board or commission) and the federal departments, under which state and federal officers act together in passing upon applications for power purposes and fix the same time periods for beginning and completion of construction in issuing permits—the state office issuing the "water permit", and the federal office the "land permit."

That both departments recognize that water appropriations are in the control of the state is clear from the following paragraph, which is contained in the two sets of regulations in the enumeration of items forming the application for preliminary permit:

A duly certified copy of such notice of application, if any, as is required to be posted or filed, or both, to initiate the appropriation of water under the local laws. This notice or application should provide for use, by the applicant for a power permit or by his predecessors, of sufficient water for the full operation of the project works.—Int. Dept. Reg. 10 (L).

Indeterminate Licenses

Although, as stated in the regulations, the permit is for fifty years only, that the tendency of the two departments is towards the indeterminate license is indicated by the following paragraph from the regulations of the Interior Department (the regulations of the Agricultural Department being but slightly different upon this point):

Upon demand in writing by the Secretary to surrender the permit to the United States or to transfer the same to such state or municipal corporation as he may designate, and to give, grant, bargain, sell, and transfer with the permit all works, equipment, structures, and property then owned or held by the permittee on lands of the United States occupied or used under the permit, and then valuable or serviceable in

the generation, transmission, and distribution of power: Provided, (1) That such surrender or transfer shall be demanded only in case the United States or the transferee shall have first acquired such other works, equipment, structures, property and rights of the permittee as are dependent in whole or in essential part for their usefulness upon the continuance of the permit; (2) that such surrender or transfer shall be on condition precedent that the United States shall pay or the transferee shall first pay to the permittee the reasonable value of all such works, equipment, structures, and property to be surrendered or transferred; (3) that such reasonable value shall not include any sum for any permit, right, franchise, or property granted by any public authority in excess of the sum paid to such public authority as a purchase price thereof; and (4) that such reasonable value shall be determined by mutual agreement of the parties in interest, and in case they can not agree, by the Secretary under a rule, which, except as modified by the requirements of this paragraph, shall be the then existing rule of valuation for power properties in condemnation proceedings in the state in which the properties to be surrendered or transferred are located. But nothing herein shall prevent the United States or any state or municipal corporation from acquiring by any other lawful means the permit or the works, equipment, structures, or property then owned or held by the permittee on lands of the United States occupied or used under the permit.—Int. Dept. Reg. 14 (S).

In a permit issued in favor of the International Power and Manufacturing Company on Clark Fork of Pend d'Oreille River in the State of Washington under date of July 22, 1913, and executed by both the Secretary of the Interior and the Secretary of Agriculture, it is provided that the permit shall be indeterminate, but revocable for non-payment of annual taxes or for violations of other provisions. It is added, however, in the same section of the permit that, "It is further understood and agreed that under the terms of said act of Congress 'any permission given by the Secretary of the Interior under the provision of this act may be revoked by him or by his successor in his discretion'." The permit is, therefore, indeterminate in name only. As the act makes the permission revocable, no Secretary can bind his successor to other conditions.

Regulation of Rates and Service

When the act of February 15, 1901 was passed, little was known of the power of the states in the regulation of public utilities. Cities and counties had regulated rates for domestic water supply and irrigation supply, but little otherwise had been done. Most of the western states now have public utility commissions which have power not only to regulate rates of all public utilities, but also to regulate their service as well.

Much has been said in recent years of a growing power monopoly. As monopoly implies control over output and prices, monopolies cannot exist under the jurisdiction of public utility commissions. As the commissions have the power to fix rates and compel service, the public is completely protected, provided no capitalization of franchise values is allowed. This point was not cared for in any of the federal right-of-way regulations issued prior to those of 1913. The regulations of both the Interior Department and the Agriculture Department now contain the following:

> That in respect to the regulation by any competent public authority of the service to be rendered by the permittee or the price to be charged therefor, and in respect to any purchase or taking over of the properties or business of the permittee or any part thereof by the United States, or by any state within which the works are situated or business carried on in whole or in part, or by any municipal corporation in such state, no value whatsoever shall at any time be assigned to or claimed for the permit or for the occupancy or use of Interior Department lands thereunder, nor shall such permit or such occupancy and use ever be estimated or considered as property upon which the permittee shall be entitled to earn or receive any return, income, price, or compensation whatsoever.—Int. Dept. Reg. 14 (T).

Although there appears no satisfactory reason why rights-of-way for irrigation, mining, and domestic purposes should be put upon a basis different from that of power, it is believed that there will be general ratification among those interested in power development if the act can be so amended that the revocable permit will be changed to an indeterminate license along the lines now incorporated in the regulations of the two departments and quoted above. If this be done, and the two departments are certainly desirous of co-operating in securing such legislation, the only real objection to existing regulations will be regarding the annual charge.

The Annual Charge

The annual charge as fixed in the regulations of the two departments runs from 10c for the first year to $1 for the tenth and each succeeding year per horsepower of the "rental capacity of the power site." In the permit to the International Power and Manufacturing Co. no compensation is required for the first ten years, and thereafter the company must pay an amount calculated from the total capacity of the power site at rates per horsepower per year, varying directly as the square of the average price for electric energy charged to consumers and customers of the company, and a table is set forth in the permit showing the charges to be paid under

varying conditions. In addition to this innovation, the permit fixes the maximum price at which electric energy can be sold, and also forbids any contract providing for furnishing to one consumer in excess of 50% of the output of the plant. It is also stated regarding submission to rate fixing bodies:

> **And provided further, That in the absence of regulation of service and prescribing of prices by any state agency, jurisdiction in the premises will, in their discretion, be exercised by the Secretaries.**

There are two main arguments for the elimination of the annual tax—first, that it amounts to a direct increased charge to the consumer; and second, that it is not consistent with public policy regarding the development of our resources.

In answer to the first, the proponents of the annual tax originally stated that the time had not come when public service commissions could so regulate rates that the annual tax would be listed as an item of operating expenses to be allowed the utility and to be paid by the consumer. The time has now come, however, and the commissions of a number of the western states have definitely fixed the rates of hydro-electric power utilities, after careful analysis of all the elements controlling such rates.

In the early history of this country the public lands were looked upon as a source of revenue only. This view point changed with the passage of the homestead act, and since that time our land laws have been based upon development rather than financial return to the nation. The Desert Land Act, the Carey Act, the Reclamation Act and the various right of way acts in behalf of railroads and canals for irrigation, mining and domestic purposes are excellent illustrations. In none of these acts does the nation seek a financial return for the land, other than the nominal charge of $1.25 per acre under the Desert Land Act. The Departments of Agriculture and the Interior through their regulations, regarding rights of way for power purposes, have chosen to depart from this public policy by fixing an annual charge. The situation would be more easily understood if an annual charge for the occupancy of the public land for any and all purposes were now levied. But no such recommendation has been made.

True conservation necessarily implies the elimination of waste—the keeping of those things in storage which can well be so kept, and the using of those things which are of fleeting value. There is probably no better illustration of this latter class than water power development. Water power unused is wasted, but when used takes the place of coal, oil,

natural gas and other fuels, which can be left stored in their natural condition until needed for other commercial purposes. Under a true spirit of conservation, power companies should be encouraged by a bonus, if necessary, to enter the field of hydroelectric development rather than to make inroads into exhaustible supplies of fuel. A practical spirit should at least dictate that water power projects should not be treated differently than other development work.

The fees fixed by the regulations of the departments are not based on the claim of federal ownership of the water, but of the land. That the applications are for right of way privileges and not water rights is emphasized in the following from Utah Power and Light Co. v. United States (37 Sup. Crt. Rep. 387, 392) decided by the United States Supreme Court March 19, 1917:

> Much is said in the briefs about several congressional enactments providing or recognizing that rights to the use of water in streams running through the public lands and forest reservations may be acquired in accordance with local laws, but these enactments do not require particular mention, for this is not a controversy over water rights, but over rights of way through lands of the United States, which is a different matter, and is so treated in the right-of-way acts before mentioned. See Snyder v. Colorado Gold Dredging Co., 104 C.C.A. 136, 181 Fed. 62, 69.
>
> As the defendants have been occupying and using reserved lands of the United States without its permission and contrary to its laws, we think it is entitled to have appropriate compensation therefor included in the decree. The compensation should be measured by the reasonable value of the occupancy and use, considering its extent and duration, and not by the scale of charges named in the regulations, as prayed in the bill.

It should be noted that the Supreme Court holds that the annual charge should be measured by the **reasonable value** of the occupancy and use, and **not** by the scale of charges named in the regulations. In a pamphlet entitled "Water Power" (prepared in connection with the Ferris Bill—a water power bill pending in Congress during 1914-16) Secretary Lane said in part:

> The true value of power sites is, then, not the nominal figure of $1.25 per acre, not their value as agricultural lands, timber lands, or coal lands, but their value as dam sites, reservoir sites, or for other uses in connection with water-power development, and for this purpose the larger and more valuable sites are worth millions of dollars.

Secretary Lane specifically argued against the government asking a return on any such amount, but the above statement represents his view of values. The subject is decidedly a debatable one among both engineers and lawyers. The

Interior Department, through its Reclamation Service, is probably the greatest single user of reservoirs. Its engineers in negotiating for its many reservoir sites, strenuously objected to allowing anything in excess of a good market price for the tracts as agricultural land or timber land. To revert to the expression used in the above quotation from the Utah Power Co. case, the experienced engineers of the Reclamation Service could not endorse the Secretary's value of "millions of dollars" as a "reasonable value of the occupancy and use."

The popular notion of the great pecuniary value of reservoirs, water rights, and other intangibles in connection with power development is a pure myth so far as the average project is concerned. Because the water falls without effort, the popular mind has thought of projects conceived and consummated in the same way. The opinion of the California Supreme Court in San Joaquin Light and Power Co. v. Railroad Commission (165 Pac. 16) should, therefore, be illuminating. In it, the Supreme Court upholds the Railroad Commission in refusing to allow the Power Company anything for its water rights other than the money actually expended in acquiring them. It said:

The Commission, in the present case, made an allowance for such value, based upon the cost incurred in the acquisition of these rights. The petitioner claims that a further allowance should have been made. Concededly, the burden is upon the public utility, in cases of this kind, to show the existence of any value claimed by it. In the effort to establish the value of its water rights, the petitioner proceeded upon two theories.

The first of these is described in the briefs as the "comparative steam cost theory." It is well described in the respondent's brief as "based on the assumption that the value of petitioner's water rights can fairly be determined by capitalizing at 8 per cent., the difference in the cost of service resulting from the operation of petitioner's hydraulic installations and what the cost of service would be if petitioner's electric energy were generated in a steam plant located near the oil field and burning oil." Of this element of the case it is sufficient to say that there was substantial evidence before the Commission to the effect that, at the ruling price of oil at the time of the hearing, the petitioner could generate electricity by means of steam plants at a less cost than that involved in the operation of its hydro-electric plants, after making due allowance for all charges in connection with the installation of the necessary steam plants. According to this testimony, the advantage in favor of generation by steam would continue until the price of oil had increased by 50 per cent. Without expressing any opinion regarding the propriety of this method of fixing the value of a water right, it is perfectly obvious that the Commission did not

impair the petitioner's rights, when it concluded that the application of the comparative steam cost theory did not show that the water rights had any value beyond their cost.

An engineer seeking a source of power for a private industrial development certainly would not recommend an hydroelectric installation unless such installation was less expensive, considering all financial features including first cost, maintenance and operation, than a steam plant. The same acid test should be applied to hydroelectric power utilities. There can be no value to a water right, or "reservoir value" or similar intangible, if the power can be produced and distributed to present points of use at a lower cost by some other practical method of installation. It is evident, therefore, that no general scale of "occupancy values" can be made. Each project must be considered on its own basis. If the policy of the annual charge must continue, the fairest general rule to apply would be to fix an annual rental equal to that which the land occupied would return if in private ownership. Private property is, of course, subject to condemnation, where the property is necessary to the operation of a public utility. There is no good reason for not submitting the public domain to the principles of condemnation. There is abundant reason, however, for adopting such reasonable congressional legislation that the question of condemning public lands will become unthinkable from the business standpoint.

Water Powers on Navigable Streams

As stated in the previous chapter, the nation has the undoubted right to control navigable streams in the interests of navigation. Under the congressional act of June 23, 1910, providing for the use of navigable streams in power development, a power company can obtain a franchise for a term not exceeding 50 years, but with no provision for renewal of franchise or compensation to the company for its property at the end of the term. An annual tax must also be paid.

In line with suggestions made for right of way permits, it is believed that the franchise for power development on navigable streams should be indeterminate, and that the annual charge should be only sufficient to reimburse the nation for any expenditures in behalf of such development.

Summary

In the interest of railroad, irrigation, mining and municipal water supply development, the national government has enacted very liberal right of way acts. In the instance of power development, only, is the legislation

unreasonable. Although the political power of the state over the power business (when intrastate) is conceded to be superior to that of the nation, departmental regulations governing the use of the public domain and navigable waters in power development attempt in a measure to regulate the business itself. Although the nation has the right to charge a rental for the use of its public lands, it has only done so, so far as rights of way are concerned, in the case of power projects. Such rental charges have been fixed by departmental regulation in an arbitrary scale, and are not measured by the reasonable value of the right of occupancy in a given case. Public policy should dictate consistency in the use of the public domain. If the nation will exact from every industry, using its lands in the future, a rental charge commensurate with the value of the lands taken and occupied, the railroad man, the miner, and the irrigator may object, but the policy thus inaugurated will at least be consistent. Under proper insistence upon diligence in development and use, and the prohibition of intangible values, hydroelectric power development should secure the positive encouragement of both state and nation, as it utilizes and conserves the natural resources, now going to waste or being uneconomically used, in a manner not possible in any other industry.

CHAPTER IX

COMMERCIAL AND CO-OPERATIVE IRRIGATION ENTERPRISES

A study of the historical development of irrigation in the western states shows that the small mountain streams along the overland trails and at or near the trading posts were the first to be used for agricultural purposes. As mines were discovered and operated, the waters of the streams in the larger valleys were diverted by simple ditches on the lower or bottom lands. Later two or more settlers joined in the construction of larger ditches for the irrigation of land higher up on the stream, and in this way all easily accessible lands in the valley were irrigated. These individual and partnership ditches were sufficient for the lower lands.

It soon became known that the higher, or mesa lands, were better than the bottom lands, but the problem of digging ditches to them offered too many difficulties for local accomplishment. It was at this point that eastern and foreign capital was secured for the construction of irrigation canals to reach the higher lands. The size and number of such systems built during the eighties indicate that the promoters had an easy task, and when we consider the time and results of the early irrigation their success must be taken as a matter of course. The simple ditches then in use were the single instrument by which land worth nothing had been brought into a high state of cultivation and great value. It was easy, therefore, to picture the rich returns of thousands of acres of such land, now barren and worthless, when under a well constructed canal. No argument was necessary to convince the investor that the real wealth lay in the water, and that a system of selling water for irrigation was better than a gold mine.

We now know that most of the systems thus built were financial disasters and that the failure was not due to either lack of land or water, or want of engineering skill. The chief error was the neglect to "tie" the land to the water. The pro-

moters and investors were right in believing that the land without the water must remain valueless, but they erred in thinking that the settlers on the land under the system would promptly take water on any terms dictated. The settler, unfortunately, was in most cases a mere "sooner," a waiter of fortune who hurried to the choice land, there to stay until bought out by the real home builder. During the eighties most of the land to be covered by the larger systems was government land and there were no statutes by means of which the canal company could protect itself against filings by "sooners" or secure a lien upon the land for its unpaid water charges. Every western state affords illustrations of large sums lost to its investors in such irrigation enterprises (now called commercial enterprises) and intelligent capital today will invest in no scheme where land and water do not go together. In fact, the attractive enterprise is really a land deal, to which the construction of the irrigation system is but incidental.

The following table (from the census statistics) shows the total area irrigated in 1909, the area irrigated in 1909 by co-operative enterprises, and the area irrigated in 1909 by commercial enterprises. The commercial enterprise differs from the mutual or co-operative enterprise in that the former supplies water for compensation to parties having no interest in the works, and the latter supplies water to stockholders only.

STATE	All Classes of Enterprises. Acreage irrigated, 1909	Co-operative Enterprises. Acreage irrigated, 1909	Commercial Enterprises. Acreage irrigated, 1909
Arid States	13,738,485	4,643,539	1,451,806
Arizona	320,051	101,025	80
California	2,664,104	779,020	746,265
Colorado	2,792,032	1,273,141	159,457
Idaho	1,430,848	628,102	44,872
Kansas	37,479	27,372	
Montana	1,679,084	333,926	62,544
Nebraska	255,950	78,605	24,834
Nevada	701,833	78,966	8,864
New Mexico	461,718	251,911	28,190
North Dakota	10,248		
Oklahoma	4,388	2,000	
Oregon	686,129	149,985	77,387
South Dakota	63,248	13,601	6,300
Texas (exclusive of rice)	164,283	41,186	73,440
Utah	999,410	687,260	64,727
Washington	344,378	81,122	66,911
Wyoming	1,133,302	116,317	87,935

As California has comparatively so large a percentage of commercial enterprises, it might be inferred that such projects are especially numerous and popular. The fact is, however, that the large acreage so served is under a small number of unusually extensive systems and that the mutual systems are the rule.

The commercial enterprises may be divided into three groups as follows:

First: Enterprises furnishing water on annual rental basis only;

Second: Enterprises selling water rights and charging either a fixed or variable annual rate in addition;

Third: Enterprises selling water rights and a pro rata interest in the irrigated system. The enterprises of this group become mutual enterprises.

First Group of Commercial Enterprises. Among the well-known California examples of commercial enterprises delivering water on a rental basis only, are the Moore Ditch, now the property of the Yolo Water and Power Co., irrigating land on the west side of the Sacramento Valley near Woodland; the San Joaquin and Kings River Canal and Irrigation Company, irrigating a large area on the west side of the San Joaquin Valley; and the Pacific Gas and Electric Company, operating a number of canals in the foothills of the Sierra in Placer County. The Steamboat Canal is one of the oldest canals in Truckee Meadows, Nevada. The Ridenbaugh Canal is one of the most important of the older canals in Idaho. It irrigates a large area in the Boise Valley.

Second Group of Commercial Enterprises. This type of enterprise, selling water rights and charging an additional annual rate, was decidedly the favorite system in the earlier irrigation development. The well-known California Development Company, diverting water from the Colorado River for delivery to the mutual water companies in the Imperial Valley, is an excellent illustration. The Fresno Canal and Irrigation Company irrigates a large area in the vicinity of Fresno, California. The Arizona Canal is one of the best known of the older systems in Arizona. It irrigates a large area in the Salt River Valley and has been absorbed by the Salt River project of the Reclamation Service. The Pecos Irrigation and Improvement Company, one of the largest irrigation projects in New Mexico, has been taken over by the Reclamation Service in connection with the Carlsbad project. The Sunnyside Canal, the best known of the older systems in the Yakima Valley, Washington, is now part of the Yakima project of the

Reclamation Service. The Sunnyside Canal was a mixture of group one and group two, as it served lands holding water rights for one annual rental and also served lands without water rights for an increased annual rental.

Third Group of Commercial Enterprises. A number of the best known mutual water companies of southern California were originally enterprises of this group. The Riverside Trust Company formerly owned the land and the water rights now under the Gage Canal in the vicinity of Riverside, California. The land was sold with shares of stock in the canal company. The Patterson Land Company, irrigating about 19,000 acres on the west side of the San Joaquin River in Stanislaus County, in selling its land includes one share of stock in the water company. Under the agreements of sale, the land company will retain management until 75% of the land is sold, after which the land purchasers will be given control, and the water company will be a regular mutual company. In the eighties a number of canal systems were built in Colorado which sold water rights and also charged an annual rate. This custom was stopped by the Anti-Royalty Act of 1887, which made it unlawful for a ditch owner to accept payment, corresponding to that for the so-called water right, before supplying water at the annual rate. To evade the provisions of the act water rights were sold providing that when water rights amounting to the estimated capacity of the canal were sold, the company would transfer the system to a new company formed exclusively of water users. In the early days, the estimated capacity was placed so high that it would not become necessary to form the new company and relinquish the works. In more recent years, however, such contracts have been executed and the capacity fixed by the company in good faith, and the type has been extensively used not only in Colorado but in Nebraska and Oregon also.

Co-operative or Mutual Enterprises

The co-operative enterprises referred to in the table are those which are controlled by the water users under some organized form of co-operation. Ordinarily this form is a regular corporation and the water rights are represented by stock in the corporation. Individual and partnership enterprises which belong to individual water users or to a small group of users are not included under the caption, "Co-operative Enterprises," in the table.

The mutual enterprise is an old type in California. So long ago as 1856 the Los Angeles Vineyard Association was formed in San Francisco and purchased a large tract of a Span-

ish rancho lying along the Santa Ana River in Los Angeles County. The original plan was to work the land upon a co-operative basis for about three years and then make an allotment of the subdivisions. In 1859 the Anaheim Water Company was incorporated and the irrigation system was conveyed to it. The stock of the water company was divided into fifty shares and was then made appurtenant to the land and could be conveyed only with the land.

As stated above, the California Development Company, diverting water from the Colorado River for irrigation in the Imperial Valley, furnished water to mutual water companies. The companies are known as Imperial Water Companies Nos. 1, 4, 5, 6, 7, 8 and 12. They differ from the ordinary mutual companies in that they own a part only of the system—that is, the laterals for distribution within the boundaries covered by the company. All of the land irrigated in the Imperial Valley in California is now included in the Imperial Irrigation District.

The mutual water company is a popular form of organization in all of the western states. Many of the original individual or partnership ditches are now operated by mutual companies. The Grand Valley Irrigation Company irrigating a large area in the Grand Valley of Colorado, is a mutual company—each share of stock entitling its owner to one-fourth inch of water. With the exception of the Arizona Canal, practically every large canal system in Salt River Valley, Arizona, was owned and operated by a mutual water company—now part of the Salt River project.

There is no fixed method of stating the amount of water represented by a share of stock in a mutual company. Very often one share of stock entitles its owner to sufficient water for one acre of land. In a great number of cases one share of stock represents a definite amount of water. In all cases, however, each share of stock of a given company represents the same amount of water for irrigation purposes, so that, if there be a shortage, the supply is pro-rated in proportion to the amount of stock held.

The constitution and by-laws of a number of the mutual companies provide that the stock shall be appurtenant to the land, and often that it shall be inseparable therefrom. In many other mutual companies the stock is designated as "floating"—that is, it is not made appurtenant to a specified tract and may be used on different parcels of land in different years. Section 324 of the Civil Code of California, dealing

with the transfer of stock of corporations, was amended in 1907 by the addition of the following:

*** * * provided, however, that any corporation organized for, or engaged in the business of selling, distributing, supplying, or delivering water for irrigation purposes or for domestic use, may in its by-laws provide that water shall only be so sold, distributed, supplied, or delivered to owners of its capital stock, and that such stock shall be appurtenant to certain lands when the same are described in the certificate issued therefor; and when such certificate shall be so issued, and a certified copy of such by-law recorded in the office of the county recorder in the county where such lands are situated, the shares of stock so located on any land shall only be transferred with said lands, and shall pass as an appurtenance thereto.**

The Regulation of Commercial Enterprises

At an early date statutes were passed in a number of the western states authorizing the county supervisors, or commissioners, to fix the rate at which commercial enterprises should furnish water to irrigators—such authority being now vested in the railroad or public service commissions. In the absence of such rate fixing the rates established by the water company controlled. The state and federal courts in California have vacillated in their determination as to whether rates agreed upon in formal water right contracts, executed prior to the rate fixing by the county board, should be enforced after lower rates had been fixed by such board. On March 2, 1897, the California legislature amended the act providing for such regulation by adding a new section expressly stating that nothing in the original act shall be construed to "invalidate any contract already made." The new section was interpreted by the California Supreme Court in Stanislaus Water Company v. Bachman (152 Cal. 716), wherein it was held, "And under the present statute the contract rights prevail in all cases, the boards of supervisors being powerless to affect or interfere with them."

In the more recent case of Leavitt v. Lassen Irrigation Company (157 Cal. 82) decided December 24, 1909, the Supreme Court said:

The language of this court in Stanislaus Water Company v. Bachman . . . must be construed in the light of the facts there presented. . . .

If it be conceived that Section 552, Civil Code, is designed to confer upon any particular consumer any special, permanent, and preferential right above what is here stated, that effort being plainly violative of the Constitution, would be held void. The same declaration applies to the provisions of the act entitled . . . approved March 12, 1889, and of the amendment of that act by the act approved May 2, 1897.

The Leavitt case deals with the prior and perpetual water right reserved by the former owner (the plaintiff) in selling his commercial enterprise to the company (defendant). It should, therefore, be easily distinguished from the case of a company selling all of its water rights upon the same basis. It has, however, caused a great deal of confusion.

The cases on this point have been most interesting in connection with the California Development Company, furnishing water to the Imperial Valley. In Imperial Water Company No. 5 v. Holabird (receiver of the California Development Company) (197 Fed. 4), decided May 6, 1912, the U. S. Circuit Court of Appeals holds that the water right contract between the Development Company and the Mutual Company is void on the grounds that the company is a public service corporation and, therefore, obligated to furnish water on tender of the annual rate. The opinion was based on the assumption that the company is a public service corporation. The Supreme Court of California, however, in Thayer v. California Development Company (164 Cal. 117), decided November 8, 1912, holds that the company is not a public service corporation as it has not sold water to any users except those under contract with it. The Court, therefore, denies the right of Thayer to receive water from the company without purchasing and holding a water right.

According to the Thayer decision, the water right contracts of commercial enterprises of the second group will be upheld in all cases where the company has delivered water only to those holding contracts. In order to place such companies in the class of public utilities subject to the jurisdiction of the California Railroad Commission, an act was passed in 1913 declaring all water companies public utilities except those organized for the sole purpose of delivering water to their stock holders at cost. This act makes all California irrigation companies, except mutual companies, public utilities.

Although a number of companies considering themselves strictly contract companies have been before the California Supreme Court since the passage of the 1913 act, in each instance it was shown that they had been operating as a public utility and, therefore, did not come within the Thayer decision. For instance, in Palermo Land and Water Company v. Railroad Commission (160 Pac. 228) there was a provision in the contracts between the company and the purchasers of land that the company would supply water at rates to be fixed by law. The company had also previously applied to the Railroad Commission to have its rates for water established.

Either of these reasons, the Court held, was sufficient to make the company a public utility.

Wherever a company can be shown to have operated as a public utility, the rule is that contracts made by it, even though valid when made, must be taken to have been entered into in view of the continuing power of the state to control the rates to be charged by public service corporations (Raymond Lumber Company v. Raymond Light and Water Company,—Washington,—159 Pac. 133). Although as shown in the Raymond case, the Supreme Court of Washington does not hesitate to abrogate water contracts, it has held in Pasco Reclamation Company v. Rankert (131 Pac. 1143) that under a contract between a land owner and an irrigation company and later conveyance of water right to the land owner, he was liable for a maintenance charge of $5.00 per acre per year which he must pay whether water is used or not. The Washington Supreme Court also held in Fruitland Irrigation Company v. Thayer (160 Pac. 1048) that contracts for water rights which expressly provide that the charge shall become a lien on land in favor of an irrigation company are enforceable in cases of default.

The Supreme Court of Nebraska in McCook Irrigation and Water Power Company v. Burtless (152 NW. 334) laid down a rule contrary to the above. The company petitioned the Railway Commission to raise its annual charge from $1.00 per acre to $2.00 per acre. The company operates upon the plan of the third type of irrigation enterprise explained above—its contracts providing that when water rights to the capacity of the canal have been sold and paid for, the canal becomes by certain acts of its officers, therein specified, the property of the water right owners. The water rights, therefore, represent an interest in the canal system. The Supreme Court held that such contracts were entered into subject to the right of the state in the exercise of its police power to regulate and fix reasonable rates to be charged for the use of water, and upheld the decision of the Railway Commission in raising the annual rate from $1.00 to $2.00 per acre per annum. As the Supreme Court of Nebraska, on account of early state legislation, has uniformly considered irrigation canals to be in the same class as railroads and other common carriers, the McCook case cannot be considered a precedent to be generally followed elsewhere.

There are a number of instances in southern California where a town has grown up within the boundaries of the territory served by a mutual water company. In some cases the

water supply for municipal use within the town is secured from the mutual water company through the ownership of stock in such company by the town. An attempt has been made in a few instances to have such mutual water company declared a public utility, but the Supreme Court of California in Escondido Mutual Water Company v. Escondido (169 Cal. 772) has held to the contrary. The following extract from the opinion is in point:

A mutual water company, organized to distribute the water which it controlled to its stockholders at cost and ratably in the proportion which their shares of stock bore to the total issued stock of the company, is not charged with the public duty of supplying to a municipal corporation that was one of its stockholders water in excess of the proportionate amount to which it was entitled as a stockholder, on the theory that the company having undertaken to furnish water for municipal purposes, was obligated to continue to do so in accordance with the needs of the municipality up to the capacity of the company's ability to supply water, if the only water that the company ever voluntarily furnished the municipality was the proportionate share to which it was entitled as such stockholders, and all excess of water which it received was taken by it from the company by force and against the company's protest.

There are a number of mutual water companies securing water under contract from companies in public service. In Limoniera Company v. Railroad Commission (162 Pac. 1033) a mutual company, so supplied, argued that its contract with the public service company could not be abrogated by the commission. The California Supreme Court held that a mutual water company taking water from a public service corporation to be supplied to its stock holders and to be used on their lands, occupies the same position as any other consumer under the system, and the rental charges against it are accordingly subject to regulation. "It is one of the 'public' that is being served by a public utility."

Who Owns the Water Right

The expression "selling water" is so commonly used that few laymen ever doubt that the irrigation company is the owner of the water right and that, in selling its system or in rate fixing, it is entitled to a considerable sum for such right. It is surprising to most, therefore, to learn that the Supreme Court of Colorado, so long ago as 1887, in Wheeler v. Northern Colorado Irrigation Company (17 Pac. 487) said:

It (the irrigation company) exists largely for the benefit of others; being engaged in the business of transporting, for hire, water owned by the public to the people owning the right to its use.

The question was not a direct issue in California until the comparatively recent case of San Joaquin & Kings River Canal and Irrigation Company v. Stanislaus County (191 Fed. 875), decided September 18, 1911. The company had brought suit against the county to enjoin the enforcement of water rates fixed by the County Supervisors. One of its contentions was that its water rights were worth $1,000,000, and that nothing had been allowed for them in the Supervisors' valuation. After a careful consideration of the authorities, Judge Morrow refused to accept the contention in the following words:

> The claim, as stated, is manifestly not sufficient to state a right of diversion. It must appear, further, that the complainant is either the owner of land for which the water is being appropriated for a beneficial use, or that the water is being diverted for the purpose of being carried by the complainant to consumers who own land for which the water is being appropriated for a beneficial use, and that the water is being so used. The complainant in this case is not the owner of any land for which the water is being appropriated. The complainant's right to divert the water of the river is therefore based upon and is measured and limited by the beneficial use of certain consumers for which the water is being appropriated. But, if the amount required by these consumers for a beneficial use is not 1350 cubic feet of water per second, then complainant has no right to divert that quantity of water; or if, for example, these consumers require only 100 cubic feet per second for beneficial use, then that would be the basis and measure and limit of complainant's right to divert water from the river, and not the capacity of complainant's headworks, canals and ditches used in making such diversion. The water right must, therefore, be the right of the consumer and attached to his land, and not the right of the complainant attached to its canal system.

The above statement by Judge Morrow is of interest as it reflects a principle of appropriation as laid down repeatedly by the Supreme Courts of Arizona, Colorado and Nebraska. On May 4, 1914, the Supreme Court of Nevada, in Prosole v. Steamboat Canal Co. (140 Pac. 720), in accepting the view of the Supreme Court of Arizona and of Colorado, refers to the company as the "diverter" and to the consumer as the "converter" or actual appropriator.

On April 27, 1914, just one week before the Prosole decision and too late to have been called to the attention of the Nevada Supreme Court, the Supreme Court of the United States decided San Joaquin and Kings River Canal and Irrigation Co. v. Stanislaus County (233 U. S. 454), on appeal from the circuit court (Judge Morrow). In a very brief opinion (less than two pages) in which the relation between the company and the consumer in perfecting an appropriation is

hardly discussed, the decree of the lower court is reversed. An important part of the opinion is the following:

It well may be true that if the waters were taken for a superior use by eminent domain those whose lands were irrigated would be compensated for the loss. But even if the rate paid is not to be determined as upon a purchase of water from the plaintiff, still, at the lowest, the plaintiff has the sole right to furnish this water, the owner of the irrigated lands cannot get it except through the plaintiff's help, and it would be unjust not to take that fact into account in fixing the rates. We are not called upon to decide what the rate shall be, or even the principle by which it shall be measured.

Although this decision of the United States Supreme Court settles the question so far as California is concerned, it does not necessarily hold for other jurisdictions and especially those in which the state supreme court has held to the contrary. In Pioneer Irr. Co. v. Board of Commissioners of Yuma County, Colo. (236 Fed. 790), the sole question to be determined by the United States District Court of Colorado was whether or not the Board should have considered the value of the water in fixing the rates. The Court said:

I suppose the plaintiff was induced by San Joaquin, etc., Co. v. Stanislaus County, 233 U. S. 454, 34 Sup. Ct. 652, 58 L. Ed. 1041, to exhibit this bill. But I am not able to accept that case as a support to the plaintiff's claim. The Constitution and statutes of California empowered the carrying company in that case to appropriate water for sale, and in the exercise of the right thus given it acquired for that purpose some of the water by mere diversion from the natural stream and purchased some of it. A carrying ditch in Colorado is not given such power and cannot acquire such rights as a carrying ditch. There is merit in the contention that our Constitution (Article XVI, Sec. 8) and statutes (Rev. Stat. Col. 1908, Secs. 3263-3268) could be given a like construction, but our Supreme Court has decided otherwise. (Citing many Colorado cases.)

The Future of Commercial Enterprises

In the introduction to this chapter it is stated that most of the early commercial irrigation enterprises were financial failures. With but a few exceptions, commercial enterprises of the first two groups are poor investments today. As previously pointed out, only enterprises of the third group—those selling an interest in the system—when part of a land project can be considered as having possibilities of success. It must be emphasized that the lack of financial security is not due to restrictive legislation or the lack thereof. It is due to the nature of the business itself. Irrigated agriculture calls for expenditures by the farmer in the preparation of his land not known in humid sections. He must be carried for a much longer period than purchasers of farming property in the non-

irrigated zone. When we realize, also, the difficulty in finding purchasers of the land under a system, we can appreciate the long period through which a system must be maintained and operated by the holding company with little or no return.

Regarding the abrogation of water right contracts, as illustrated by Nebraska case of the McCook Co., cited above, the company is often assisted in securing increased maintenance and operation rates by the public service commission. This must be so, as the annual charge was generally fixed by contract throughout the entire west at $1.00 per acre per year—which amount is entirely too low for the ordinary system.

Many of the commercial enterprises have been purchased and included in projects of the United States Reclamation Service. Other large ones, like the California Development Co., have been taken over by irrigation districts. It is certain that the next irrigation census will show a marked decrease in the proportion of any state's total irrigated acreage served by such enterprises.

In contrast, is the growth of the mutual company. As indicated, the commercial enterprises of the third group pass automatically into mutual companies. The water users' associations formed under Reclamation Service projects are mutual companies which will ultimately operate the project. Similar companies are formed in accordance with state legislation under the Carey act projects. The mutual company is, therefore, destined to be the controlling type in the operation of irrigation works.

CHAPTER X

THE DESERT LAND ACT AND THE CAREY ACT

When the arid public lands were first occupied and irrigated there was no act providing for their alienation other than the homestead and pre-emption acts, both passed in 1862. The first act to specially provide for the conditions of the irrigation states was the desert land act of March 3, 1877, which, slightly amended, is still in force. The only public land and irrigation states in which the act is not operative are Kansas, Nebraska, and Oklahoma.

Only desert lands are subject to entry and it has been held that the following lands are not desert: Lands which produce native grasses sufficient to make an ordinary crop of hay in usual seasons; lands which will, without irrigation, produce a reasonably remunerative crop of any kind; lands bearing a natural growth of trees.

As entry may be made by any citizen, twenty-one years of age, a woman married or single, is entitled to do so. Under the original act, one section, or 640 acres, was the limit of entry, but by the act of March 3, 1891, it was restricted to 320 acres.

To make entry an application must be filed at the local land office, showing that applicant is a citizen, or has declared his intention to become such; that he is 21 years of age or over; that he is a bona fide resident of the state in which the land lies; that he has not previously made desert land entry or taken an assignment of such; that he has not since August 30, 1890, acquired title to nor is claiming under any of the agricultural lands laws, including the lands applied for, lands which in the aggregate exceed 320 acres; and that he intends to reclaim the lands described in the application through irrigation within four years.

The act of March 3, 1891, provided for the assignment of the entire entry, but the act of March 28, 1908, allows an

assignment in whole or in part—except that not less than a 40-acre subdivision can be assigned. The latter act forbids the assignment of an entry to a corporation or an association.

With the application a map must be filed showing the proposed method of irrigating the land described, and a payment of 25 cents per acre must be made. Before the end of each of the first three years after entry proof must be filed at the local land office showing the expenditure of one dollar per acre during the year. This "annual proof" must be sworn to and must be corroborated by the affidavits of two reputable witnesses. Expenditures for ditches, dams, fences, roads, the first breaking of the soil, barns and other stock buildings, and wells for irrigation purposes, will be allowed. Expenditures for stock in an irrigation company to furnish water to land entered will also be allowed.

The entryman, or his assignee, is allowed four years from date of entry to satisfy the requirements of the act, but he may make final proof and receive patent as soon as he has expended three dollars per acre, has reclaimed all the irrigable land included in his entry, and has cultivated one-eighth of the entire area entered. When possible under the state laws, the final proof must show an absolute water right for the irrigation of the land entered. Up to ten years ago the Department was very lax in passing upon final proofs, but under the present regulations a rigid examination is made of the water right and the extent of irrigation and cultivation. At the time of making final proof a payment of one dollar per acre must be made. Under an act of March 28, 1908, the four-year period may be extended for an additional period not exceeding three years at the discretion of the Land Office.

As there is no residence requirement in the desert land act other than to reside in the state and as payment for the land itself is only $1.25 per acre, the act has been very popular. In the past many irrigation companies secured large areas of public land by stipulating with entrymen to furnish water right and take in return one-half or more of the land entered. Such contracts were illegal and under the present vigilance are not tolerated. It is allowable, however, in contracting with an irrigation company for a water right for a desert entry to stipulate that on default of the specified cash payment the entryman shall deed to the company a portion, or all, of the land entered. It is evident that the permissible contract may result in the same end as the prohibited contract, but on its face at least, it is not an agreement to convey.

The Carey Act

In the last chapter reference was made to the many failures of private irrigation companies organized to irrigate public land—the principal cause for which being the inability of the company to restrain "sooners" or mere speculators from entering the land, and to secure a sufficient lien, upon such land as subscribed for water rights, for non-payment of annual charges. To relieve this situation Congress in 1894 passed the so-called "Carey Act" — named after Senator Carey of Wyoming, who introduced it.

The act authorized the Secretary of the Interior, with the approval of the President, to contract with each state having desert lands for the free grant to the state of not exceeding one million acres of such lands "as the state may cause to be irrigated, reclaimed, occupied, and not less than twenty acres of each one hundred and sixty-acre tract cultivated by actual settlers, within ten years after the passage of this act." Before any segregation of land was allowed, the state had to file a map of the land and the plan proposed for its irrigation. As satisfactory proof, according to the regulations of the Secretary of the Interior, was made by the state "that any of said lands are irrigated, reclaimed, and occupied by actual settlers, patents shall be issued to the state or its assigns for said lands so reclaimed and settled: Provided, That said states shall not sell or dispose of more than one hundred and sixty acres of said lands to any one person."

The original act was a great step in advance in that it allowed the segregation of all the public lands under an irrigation project and thus precluded the earlier type of speculator, but it failed to provide for a lien in case of non-payment of water right charges. The act of June 11, 1896, met this need by authorizing liens to be created by the state for the actual cost of reclamation and reasonable interest, and by providing that patents shall issue to the state, without regard to settlement or cultivation, as soon as a proper irrigation system and ample water supply are furnished. It is specifically provided in this amendatory act that the United States shall in no way be liable for such lien, or any part thereof.

As stated above, the original act provided that the lands segregated must be reclaimed as specified within ten years after the passage of the act. No change was made in this severe requirement until the act of March 3, 1901, which provided that the ten years' period "shall begin to run from the date of approval by the Secretary of the Interior of the state's application for the segregation of such lands." It further

authorizes the Secretary of the Interior in his discretion to grant an extension not exceeding five years.

The original act applied only to states. The act of February 18, 1909, extended the provisions of the act to the territories of Arizona and New Mexico. The act of March 15, 1910, authorized the Secretary of the Interior to temporarily withdraw from entry areas embracing lands for which a state proposes to make application, pending the investigation and survey preliminary to the filing of the regular application for the segregation.

The Secretary of the Interior has prepared regulations which must be followed by the states in making Carey act segregations. No segregation is now approved until examined on the ground and reported favorably by a government engineer. This course has been criticized by some as reflecting upon the states, but as the government is the owner of the land it should not be asked to grant such until all the conditions precedent thereto have been fulfilled to the satisfaction of its representatives. The following statement from the annual report of the Commissioner of the General Land Office for 1911 is in point:

> The importance of this (the examination of projects) can not be overstated, for not only will the lands remain segregated for a long period of time, if the order therefor is once made, but in making such segregation the department is practically committed to the feasibility of the proposition submitted by the state, and people thereafter dealing with the state are in a great degree entitled to regard the proposition of the state as having received the endorsement of the Department.

State Legislation

The provisions of the Carey act have been accepted by Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, South Dakota, Utah, Washington and Wyoming. Idaho and Wyoming were especially active in preparing for development under the Carey act. There was close co-operation between the officials of the two states and their original legislation in this regard was practically the same, and, as amended from time to time, has served as a model for the other states.

Under the special state legislation, the operation of the Carey act as far as the state is concerned is entrusted to a board. The irrigation project is not constructed by the state, but by an individual, association or company contracting with the state through the board. To initiate the enterprise, the contractor files with the board a request for the withdrawal or segregation of the desired tract of desert public land and a

proposal to construct the irrigation system, stating the source of water supply, the location and dimensions of the proposed works, the estimated cost of construction, and the price and terms at which perpetual water rights will be sold. The request must be accompanied by a certificate of the state engineer showing that the contractor has made proper application to appropriate the necessary water. A certified check of specified amount must be deposited with the board as a guarantee that the contractor will execute a contract with the state in case the segregation is made.

The state engineer is required to report on the feasibility of the scheme, and if his report be favorable the board applies to the Secretary of the Interior for the segregation of the desired tract. If granted, the board and the contractor execute an agreement which includes complete plans and specifications regarding the execution of the proposed work, and specifies the price, terms, and conditions under which water rights (carrying a proportional part of the system) will be sold to settlers. The contractor must furnish a bond, of amount prescribed by statute or regulation of board, as a guaranty of faithful performance of contract.

As soon as the segregation has been made and work initiated by the contractor on a proper basis, the board must publish notice stating that the lands segregated are open for settlement and the price which must be paid to the state for the land and to the contractor for the water right. Any one intending to settle within the project must first execute a water right contract with the contractor for the tract upon which he intends to file. He then applies to the board for the tract, and if successful secures a certificate of location on payment of one-half the price of the land fixed by the state. He must establish his residence on the tract within six months after water is ready for delivery and must cultivate at least one-sixteenth of the land entered during the first year and at least one-eighth during the second year. He must make final proof within three years and complete his payment to the state. The latter payment is generally only fifty cents—twenty-five cents to be paid on entry and twenty-five cents on final proof. The statutes provide for the control of the system being given to the water users thereunder, but the condition precedent thereto varies greatly. Idaho gives control when 35 per cent of the total lien has been satisfied, while South Dakota leaves the control with the contractor until 90 per cent of the land has been sold. In Oregon the system must be turned over to the settlers within ten years.

Development under the Carey Act

The report of the Commissioner of the General Land Office for the year ending June 30, 1916, gives the following statistics in regard to the Carey Act.

State.	Area segregated acres.	Area patented to states, acres.	Area for which time to reclaim extended acres.	Area temporarily withdrawn for investigation under the act of 1910.
Arizona	.....	.....	.....	32,630
Colorado	284,564	.....	.....	106,021
Idaho	1,306,843	516,086	54,116	19,107
Montana	228,974	30,684	62,585	.....
Nevada	36,809	.....	.....	30,400
New Mexico	7,565	.....	.....	.....
Oregon	357,879	62,718	98,746	75,498
Utah	141,815	.....	.....	62,637
Wyoming	1,343,829	151,968	210,758	1,781
Total	3,708,367	761,455	426,205	328,075

In addition, 3,302,662 acres for which applications had been made had been rejected or relinquished. The area patented to the states was 4,244 acres in 1914, 146,079 acres in 1915, 160,741 acres in 1916.

Under the amendment of 1910, permitting temporary withdrawals of land during its investigation, to June 30, 1916, 4,846,355 acres had been applied for, 2,285,702 had been rejected before withdrawals, 2,490,430 acres withdrawn, 2,162,355 acres restored, and 328,075 acres remained withdrawn.

Colorado

Only one project, covering 20,000 acres, has been completed and is in use. Of the others for which segregations were made, some have been allowed to lapse or have been cancelled, those remaining have made little prograss in actual construction during the last two years.

Idaho

The thirty projects in Idaho, listed in the 1916 report of the State Land Department, had a total area of 1,863,000 acres, of which 747,000 acres had been sold and 124,000 acres were open to entry. The total final cost of these systems was estimated as $54,000,000, of which $24,000,000 was reported as having been spent. The cost per acre of water rights varied generally from $25 to $65. Over one-half of these areas are located in the vicinity of Twin Falls.

Montana

In 1916 there were 173,000 acres in projects under way. The state had approved sales for 50,000 acres, the United States had issued patents to the state for 21,000 acres of this and the state had actually issued patents to settlers for 11,000 acres. Of the six active projects, three were completed and supplying land.

Nevada

During 1915-16, temporary withdrawals were allowed for three small projects. Although 37,000 acres had been segregated, no land had been patented to the state to June 30, 1916.

Oregon

In 1916, five Carey Act projects covering about 200,000 acres of irrigable land were under construction. One of these, the Tumalo project, was taken over and completed by the state at an expenditure of $450,000. About 22,000 acres of the Carey Act and private lands are included. Of the Carey Act lands in the Tumalo project about 7,500 acres have been listed for patent and 2,400 acres actually deeded. About 6,000 acres were irrigated in 1916.

Utah

In November, 1916, there were 27,000 acres of Carey Act entries in force. This is all within one project. The state had issued patent lists covering 26,000 acres which had not been approved by the General Land Office. On other proposed projects little progress had been made.

Wyoming

To December, 1916, 137,000 acres had been covered by settlers' filings and patents had been issued to settlers for 104,000 acres. Segregations had been made for 46 systems, patents to settlers had been issued under eighteen projects. The authorized maximum selling price of water rights varied from $30 to $50 in most of these systems. The period since 1911 has been mainly one of reorganization and readjustment of conditions, particularly financial, in projects previously undertaken, rather than one of new systems. The projects on which lands have been patented have an average size of about 10,000 acres each, the largest area patented to the state in any one project being about 20,000 acres.

CHAPTER XI

THE RECLAMATION ACT

In the case of United States v. Hanson (167 Fed. 881), the United States Circuit Court of Appeals thus expressed itself regarding the need for the Reclamation act:

Congress passed the Reclamation act to make marketable and habitable large areas of desert land within the public domain, which lands are valueless and uninhabitable unless reclaimed by irrigation and the irrigation whereof is impracticable except upon expenditure of large sums of money in the construction of a system of reservoirs and distributing canals. All previous efforts of the government to make these arid lands available for settlement had resulted in failure. By the Desert Land act of March 3, 1875, Congress has made provision for their use by individual settlers, and on March 3, 1877, had enacted further legislation to facilitate the reclamation of such lands by private entrymen, and in 1894, to provide for the irrigation of the arid public lands, had passed the Carey act, by which it proposed to donate to the states in which such lands were located, so much thereof, not exceeding one million acres in each state, as the state would cause to be reclaimed. These efforts having failed to accomplish the desired end, the Reclamation act was passed.

Although the above statement may be considered entirely too strong by many who have watched the development under the Carey act, it is certain that the many western societies interested in irrigation labored for years to secure the passage of some act under which the nation itself would do the actual construction work in connection with storage and diversion projects. After many unsuccessful attempts, the Reclamation act was finally passed on June 17, 1902.

The Reclamation Act of June 17, 1902

The act creates a fund known as the "Reclamation Fund" from the moneys received from the sale of public lands in the following western states: Arizona, California, Colorado, Idado, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah,

Washington, and Wyoming. As the public lands in Texas belong to the state, the original act did not include Texas, but its provisions were later extended to Texas by special congressional and state legislation. In 1910, Congress authorized a special bond issue of $20,000,000, to be used exclusively for the completion of projects then initiated.

The Secretary of the Interior is authorized to do the many things provided for in the act. In connection with the development of any project he must withdraw from public entry the lands required for the irrigation works, and also must withdraw from all entry, except under the Homestead laws, the lands deemed irrigable under the proposed project. If later the project is held to be not feasible, the lands so withdrawn are to be restored to entry. The two withdrawals mentioned above were originally called first form withdrawal and second form withdrawal. As the irrigable lands could be entered under the Homestead act, although subject to all the limitations and conditions of the Reclamation act, they were settled upon in many cases just as soon as it was known that a Reclamation project was proposed. As the project had not been sufficiently developed for the Land Office to know what lands would be irrigated, much land was occupied above the canal lines. Furthermore, as the project was slowly developed and as the settlers had few means of making a livelihood, there was much dissatisfaction. This difficulty was removed in the later projects by the Secretary of the Interior withdrawing all lands under the first form. There was some question as to the legal power of the Secretary to withdraw irrigable lands under the first form and the doubt was removed by a congressional act in 1910. By an amendatory act approved February 18, 1911, it is provided that no entry shall be made and no entryman shall be permitted to go upon lands reserved for irrigation purposes until the Secretary of the Interior has established the unit of acreage, fixed the water right charges and the date when water will be delivered.

As soon as a project is found practicable and contracts have been let, the act provides that the Secretary "shall give public notice of the lands irrigable under such project, and limit of area per entry, which limit shall represent the acreage which, in the opinion of the Secretary, may be reasonably required for the support of a family upon the lands in question; also the charges which shall be made per acre upon the said entry, and upon the lands in private ownership which may be irrigated by the waters of said irrigation project, and the number of annual installments, not exceeding ten, in which

such charges shall be paid and the time at which such payments shall commence." The charges announced by the Secretary in the public notice are determined with a view of returning to the fund the cost of the project and in practice are apportioned equally throughout the project. (See Reclamation Extension Act.)

The public lands subject to entry can be entered only under the provisions of the Homestead act in tracts of not less than ten nor more than one hundred and sixty acres. The entry is subject to the limitations and conditions of the Reclamation act and the commutation provisions of the Homestead act do not apply. The original act placed the minimum area at forty acres. Before receiving patent the entryman must reclaim at least one-half of the total irrigable area of his entry and must pay the charges apportioned against the land entered. (Requirements changed by act of August 9, 1912, and act of August 13, 1914.)

Although private lands may be included within the project, no water right for such lands can be sold for a tract exceeding 160 acres to any one landowner, "and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land or occupant thereof residing in the neighborhood of said land, and no such right shall permanently attach until all payments therefor are made." The Secretary has fixed a limit of residence in the neighborhood at a maximum of fifty miles. This limit of distance may be varied, depending upon local conditions. After water-right application has been made and accepted (which constitutes a water-right contract), the applicant is not required to continue his residence on the land or in the neighborhood. It was formerly held that a corporation was entitled to hold land under a government project, but, as a condition precedent thereto, a showing had to be made that the aggregate area held by the corporation and its stockholders in their individual capacities did not exceed one hundred and sixty acres. By departmental order of July 11, 1913, the policy was changed and no application for a water right by a corporation will now be accepted.

The Secretary is authorized to use the Reclamation Fund for the operation and maintenance of reservoirs and irrigation works. When the payments required by the act are made for the major portion of the lands irrigated, the management and operation of the irrigation works is to pass to the landowners thereunder to be maintained at their expense under some form of organization acceptable to the Secretary; but

"the title to and the management and operation of the reservoirs and the work necessary for their protection and operation shall remain in the Government until otherwise provided by Congress." It is noteworthy that the act does not specify that the title to the irrigation works shall pass to the landowners. The only inference, therefore, is that the title to the works, as well as reservoirs, is to remain in the Government.

As in a number of other congressional acts, it is expressly stated in this act that it shall not be construed as interfering with state or territorial laws regarding the appropriation, use or distribution of water used in irrigation, or as in any way affecting any right to the waters of an interstate stream. The Secretary is directed to proceed in conformity with the local laws.

The doctrine of appurtenancy is included in the following language:

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 the limit of the right.

The original act provided that within each ten-year period the major portion of the funds arising from the sale of public lands within any state or territory should be expended within the limits thereof. The section so providing was repealed by Congress in 1910, so that the Secretary is now at liberty to expend moneys on feasible projects regardless of the geographical source of such.

As stated above, the operations under the Reclamation act are under the Secretary of the Interior. Prior to the passage of the act in 1902, the Hydrographic Division of the Geological Survey had been making surveys of reservoir sites and proposed canals in many of the western states. After the passage, this Division became the Reclamation Service under the supervision of the Director of the Geological Survey. In 1906, the Service was made a separate bureau of equal standing with the Geological Survey and with its own director.

One of the first projects undertaken was the Salt River project made up of lands about Phoenix, in Arizona. As practically all the lands included were in private ownership, the question immediately arose as to what lien should be given the government to induce it to build the project. The lien in the case of public land is assured, as the title can not pass until all the water right payments have been made. To satisfy the requirement in regard to the private lands, the first so-called Water Users' Association was formed. The shareholders of

this association, which is regularly incorporated, are the landowners under the project. The capital stock is fixed at the estimated cost of the project and each acre is entitled to one share of stock. The association enters into a contract with the Secretary of the Interior pledging itself to repay the cost of construction. Each shareholder in executing his stock subscription agrees that the payments due upon his stock shall be a lien upon his land and shares, and that the lien may be enforced by the association by foreclosure in the manner provided by law for the foreclosure of mortgages. The land is thus bound to the association and the association to the Secretary. Although not necessary so far as the lien is concerned, the practice has been to compel entrymen on the public lands to become stockholders in the association. The association levies assessments on the shares of stock from year to year to pay the installments.

Act of August 9, 1912

The Act of August 9, 1912, provides that one making a homestead entry within a project may secure a patent after submitting satisfactory proof showing compliance with the provisions of law as to residence, reclamation and cultivation. It likewise provides that a holder of water-right certificate on a project shall be entitled to final water-right certificate upon proof of cultivation and reclamation. No such patent or certificate shall issue until all sums due the United States, on account of such land or water right, at the time of issuance of patent or certificate have been paid. Every patent or water-right certificate shall reserve to the United States a prior lien on the land for the payment of all sums due or to become due to the United States.

Another important provision of this act is that the Secretary of the Interior is authorized to designate a fiscal agent or officer of the Reclamation Service to whom shall be paid the sums due on reclamation entries or water rights. Before the passage of this act it was necessary to make such payments to the land office of the district in which the project was situated. As such office is generally located at some point distant from the project, the requirement necessitated much trouble which is now obviated.

Reclamation Extension Act of August 13, 1914

The Reclamation Extension act is by far the most important of the amendments to the Reclamation act. Section one provides that any person making entry or water-right application after the passage of the act shall pay five per cent of the construction charge as an initial installment, and shall pay

the balance in fifteen annual installments, the first five of which shall each be five per cent of the construction charge and the remainder shall each be seven per cent. The first of the annual installments shall be due on December first of the fifth calendar year after the initial installment. Section two provides that any person whose land or entry has previously become subject to the Reclamation act shall pay the construction charge, or the portion thereof remaining unpaid, in twenty annual installments. The first four of such installments shall each be two per cent, the next two installments each four per cent, and the next fourteen installments each six per cent.

Section five deals with the operation and maintenance charge which must be paid in addition to the installment of the construction charge. Such charge shall be made for each acre-foot of water delivered; but each acre of irrigable land, whether irrigated or not, shall be charged with a minimum operation and maintenance charge based upon the charge for delivery of not less than one acre-foot of water. The Secretary is authorized, in his discretion, to transfer "the care, operation, and maintenance of all or any part of the project works" to a water users' association or irrigation district, under the project, upon request of such association or district. On November 1, 1917, the operation and maintenance of the Salt River project, Arizona, was turned over to the Salt River Water Users' Association. It is now estimated that the returns from the leasing of power on that project will be sufficient to pay the construction installments. Early in 1917, the Minidoka Irrigation District took over the operation and maintenance of the North Side Minidoka project.

By the provisions of section seven, the Secretary is authorized to appoint the water users' association or irrigation district, under any project, as the fiscal agent of the United States to collect the annual payments on the construction charge and the annual charges for operation and maintenance.

Section eight authorizes the Secretary to make general rules and regulations governing the use of water within a project. He may require the cultivation and reclamation of one-fourth the irrigable area under each water-right application or entry within three full seasons after filing application or entry, and the cultivation and reclamation of one-half said area within five full seasons.

Section nine provides that where application for water right for lands in private ownership or lands under entries not subject to the Reclamation act shall not be made within one year after passage of this act—or in cases where public

notice has not been issued, within one year of issuance thereof—, the construction charges for such land shall be increased five per cent per year until such application is made.

Section twelve provides that before any contract is let or any construction work begun on any project adopted after the passage of the act, the Secretary shall require the owners of private land thereunder to agree to dispose of all lands in excess of the farm unit, upon such terms and at not to exceed such price as the Secretary may designate. In case of refusal by a landowner to agree to such requirements, his land shall not be included within the project. As previously stated, the water users' association was the means of "tying" land in private ownership to the project. Each landowner subscribed for stock in the association for all of his land within the project. If he had over 160 acres, he executed an "excess lands" contract authorizing the association to sell the excess at public auction if he had not disposed of it to persons qualified to hold under the act by the time water was ready for delivery on the project. By the terms of section twelve, the landowner contracts directly with the Secretary and, further, binds himself to maximum price and terms of sale.

Section sixteen provides that after July 1, 1915, "expenditures shall not be made for carrying out the purposes of the reclamation law except out of appropriations made annually by Congress therefor"—such appropriations to be paid out of the reclamation fund. Prior to the passage of the act, the Secretary had full power to make allotments regarding expenditures for projects.

Judicial Construction of Reclamation Act

As was to be expected where the operations are of such magnitude and cover so much territory, the constitutionality of the Reclamation act was early attacked, but thus far it has been upheld (United States v. Hanson, 167 Fed. 881; Burley v. United States, 179 Fed. 1). In a former chapter, the Kansas v. Colorado case was discussed, and it was stated that many at first supposed that the Reclamation act was therein declared unconstitutional. The point made by the Court, however, was that congress could not override state legislation in regard to the reclamation of arid lands, and the Supreme Court went on to show that the Reclamation act not only did not do so, but specifically provided for the observance of local law. In the paragraph of the decision showing the power of the government to reclaim lands, emphasis is laid upon the reclamation of lands within the territories and upon the reclamation of public lands within the states. In the two cases cited

above as upholding the constitutionality of the Reclamation act, the question of the power of the Reclamation Service to build projects for the irrigation of private lands only, within a state, was not raised. In the second of the two cases (Burley v. United States, 179 Fed. 1) the Court said:

> It would be strange if the national government could enter the territory of a state where there were no public lands of the United States requiring irrigation and no public lands through which water flows necessary for the irrigation of arid lands, and by legislation provide a system of irrigation for the private lands within the state and control its administration. It would, indeed, be a strange proceeding, and obviously wholly outside of the authority of Congress.
>
> But in this case the United States is the owner of large tracts of land within the states named in the act of June 17, 1902. The public welfare requires that these lands, as well as those held in private ownership, should be reclaimed and made productive. To do this effectively and economically with the available water supply large tracts must be brought into relation with a single system or project. These states having arid lands have accordingly acted upon the subject.

Section four of the original Reclamation act, regarding the charges to be paid, contained the following: "The said charges shall be determined with a view of returning to the reclamation fund the estimated cost of construction of the project. * * *." It was accordingly argued that the act did not contemplate the payment of an operation and maintenance charge by the water user—that such charge was to be borne by the government without reimbursement. The direct question was presented in Swigart v. Baker (229 U. S. 187), and the United States Supreme Court therein held that the operation and maintenance charge was a necessary part of the construction charge and must be paid by the water user.

Development Under the Reclamation Act

The net investment in the twenty-seven projects under the Reclamation act to June 30, 1916, was $100,999,960. The total allotment from both the reclamation fund and the $20,000,000 bond issue for the twenty-seven projects to June 30, 1916, was $124,255,130. Of this total amount, $14,042,000 was allotted to the Salt River project, Arizona, $13,445,643 to the Boise project, Idaho, $10,464,535 to the Yakima project, Washington, and $9,363,815 to the Yuma project, Arizona and California.

The charges against the lands under the project are divided into "construction charges" and "operation and maintenance charges." The aggregate return for the "construction charges" to June 30, 1916, was $4,146,630, and for the "opera-

tion and maintenance charges," $2,448,095. A number of projects have not yet been completed and water has been distributed by the part of the system in operation under temporary water rental contracts. The total of such rentals to June 30, 1916, was $3,330,320.

The area of land to which water could be supplied by the projects on June 30, 1916, was 1,680,756 acres, and the total area under the projects was 3,115,624 acres. The project crop reports for 1915 cover 1,330,222 acres of irrigable land, of which 814,906 acres were irrigated and 757,613 acres were cropped. The total value of crops (1915) was $18,164,452. Of this total amount the value of crops on the Salt River project, Arizona, was $3,661,769; on the Sunnyside unit of the Yakima project, Washington, $2,750,326; on the Minidoka project, Idaho, $1,725,515; on the Boise project, Idaho, $1,526,873; on the North Platte project, Nebraska and Wyoming, $1,263,617; on the Rio Grande project, New Mexico and Texas, $1,103,389; and on the Uncompahgre project, Colorado, $1,044,915.

As indicated by the above statement of moneys expended and areas covered, the physical works comprising the project are likewise of great magnitude. In canal construction to June 30, 1916, the Service had completed 382 miles of over 800 second-feet capacity, 664 miles of from 300 to 800 second-feet capacity, 1,580 miles of from 50 to 300 second-feet capacity, and 6,891 miles of less than 50 second-feet capacity. Storage reservoirs have been built as part of most of the projects and many of them for both capacity of reservoir and height of dam are noteworthy. The Roosevelt reservoir of the Salt River project, Arizona, has a capacity of 1,367,300 acre feet, and a dam 280 feet high; the Arrowrock reservoir of the Boise project, Idaho, a capacity of 250,000 acre feet and a dam 351 feet high; the Pathfinder reservoir of the North Platte project, Nebraska and Wyoming, a capacity of 1,100,000 acre feet and a dam 218 feet high; the Lahontan reservoir of the Truckee-Carson project, Nevada, a capacity of 290,000 acre feet and a dam 129 feet high; the Elephant Butte reservoir of the Rio Grande project, New Mexico and Texas, a capacity of 3,000,000 acre feet and a dam 300 feet high; and the Shoshone reservoir of the Shoshone project, Wyoming, 456,000 acre feet capacity and a dam 240 feet high.

The projects should be as interesting to the student of water right problems as they are to the engineer. Among those projects which are interstate in their operations are the Yuma project, diverting water from the Colorado in California

for the irrigation of lands in California and Arizona (the water being syphoned under the river from California to Arizona); the Lower Yellowstone project, diverting water from the Yellowstone River in Montana for the irrigation of lands in Montana and North Dakota; the North Platte project, diverting water from the North Platte River in Wyoming for the irrigation of lands in Wyoming and Nebraska; and the Rio Grande project, diverting water from the Rio Grande for the irrigation of lands in New Mexico and Texas. Lake Tahoe, at the head of the Truckee River in California, is one of the reservoirs of the Truckee-Carson project in Nevada; and Jackson Lake, at the head of the Snake River in Wyoming, is the reservoir for the Minidoka project and Carey act projects on the Snake River in Idaho. Illustrations of direct diversions from one stream basin to another are the Truckee-Carson canal, diverting the waters of the Truckee River for storage in the Lahontan reservoir in the Carson River, and the Uncompahgre tunnel, diverting the waters of the Gunnison River to the Uncompahgre River.

Although the results accomplished in construction work and acreage brought under intensive cultivation are most commendable, the incorporation of many separate and conflicting systems in a single project should be considered among the greatest attainments in operating under the Reclamation act. By the purchase of the Arizona Canal and a number of mutual canal systems in the Salt River valley, the entire valley has been brought under the Salt River project. Previous to the organization of the Orland project, California, the Stoney Creek Irrigation Co. and the Lemon Home Canal Co. were in litigation over water rights on Stoney Creek. The two canals were purchased as part of the distribution system of the Orland project. The Uncompahgre Valley was brought into one project by the purchase of the Montrose and Delta Canal, the Loutzenhizer Canal, the Selig Canal and the Garnet Canal. In the Boise project, not only were the New York Canal and the Idaho-Iowa Canal purchased, but two irrigation districts and a number of mutual and private ditches were absorbed by the project. On the Truckee-Carson project a number of individual and partnership ditches were taken over and the entire lower Carson Valley was brought into the project. Similar action has been taken on other projects.

CHAPTER XII

IRRIGATION DISTRICTS

Legislation for the formation of districts for flood protection, drainage and roads was long ago adopted in both the eastern and western states. Such acts secure for a community the benefits of protective or public improvement works through taxation, even though a minority of the property holders object. As the appreciation of the results of irrigation in the interior valleys of California spread during the eighties and as the obstacle in the way of community enterprises of the old partnership or ordinary corporation type seemed to be the larger ranchers who opposed the movement, the compulsory district organization was suggested. The first general irrigation district act was adopted by the California legislature in 1887, and has since been generally known as the Wright Act, as State Senator C. C. Wright was the most prominent champion of the measure.

The California Irrigation District Act

The California irrigation district act as amended and supplemented was re-enacted in 1897 and is locally known as the Bridgeford Act. Statutes very closely following those of California have been adopted in every irrigation state.

The following presentation of the provisions of the irrigation district act is for the Bridgeford Act of California, but it will serve as a general statement for such legislation in the other states as the points of difference are but few.

An irrigation district is initiated by a petition to the board of supervisors signed by a majority in number of the holders of title to lands susceptible of irrigation from the proposed source and representing a majority in value of said lands. The petition must be published for two weeks and be presented at a regular meeting of the board, at which time a hearing is given to all those interested. If the action of the board

is favorable it defines the boundaries and divides the proposed district into three or five divisions.

After favorable action by the board a date is set for an election on district organization, the notice for which must be published for three weeks. All qualified electors within the district may vote upon the organization and at the same time vote for the three or five directors, an assessor, a tax collector, and a treasurer. Two-thirds of all votes cast must be for the formation of the district in order to carry it. If the vote be favorable, the board of directors so elected has control of the district business, causes surveys and plans of the irrigation system to be made and, after petition so to do, causes a bond election to be held. At this election a majority of the votes cast is necessary to carry the bond issue. The bonds bear interest not exceeding six per cent and are payable from the twenty-first to the fortieth year.

The interest on the bonds and the operation and maintenance expenses of the district are paid by taxing all lands (exclusive of improvements) within the district on an ad valorem basis. The act specifically provides for the sale of property for non-payment of taxes as in the case of non-payment of state or county taxes.

Several amendments to the district act were passed at the regular and special sessions of the California legislature in 1911. The aim of all of the amendments was to secure a better financial basis for the sale of the district bonds. The principal act provides for a detailed examination of the feasibility of the districts by a commission, composed of the attorney general, the state engineer, and the superintendent of banks, when called upon to do so by the district board of directors. When the commission approves the feasibility of any district project, the bonds of the district may be registered at the office of the state controller and thereupon shall be considered legal investments for all trust funds and for funds of insurance companies, banks, etc., and are in general placed upon the same legal basis for purposes of investment as the bonds of cities, counties and school districts. By an amendment of the district act in 1917, the commission is authorized to examine the district's engineer's report, regarding the nature and cost of construction works, preliminary to a bond issue. It may make additional surveys and examination at the expense of the district, and shall make a full report on the feasibility of the project to the directors of the district. After the commission has approved a bond issue, no material

change can be made in the plans without the consent of the commission.

Prior to 1913, no state official reported upon the feasibility of an irrigation district, except in regard to the certification of the bond issue as above stated. In that year the act was amended to provide for the filing with the state engineer of a copy of the petition on organization to the board of supervisors, and for a report on the feasibility of the project by the state engineer. If the state engineer reports that the project is not feasible, the board of supervisors must dismiss the petition, unless petitioned in writing by three-fourths of the holders of title to land within the proposed district. The 1913 amendment further provides that progress reports of construction work under bond issues shall be filed with the state engineer, and the state engineer is authorized to examine the affairs of a district and report thereon. In 1917, the state engineer was authorized to make preliminary surveys and field investigations of proposed district projects at the expense of the state, and, pending the completion of such surveys and investigation, the state water commission was authorized to withhold from appropriation any unappropriated waters.

In 1917, as an alternative method of organization, it was provided that the organization may be proposed by a petition signed by not less than five hundred petitioners, each petitioner to be a resident of the district or land owner therein, said petitioners to own not less than twenty per cent in value of the land in the district.

Points of Difference in Irrigation District Acts

The principal points of difference in the various state irrigation district acts are the provisions regarding organization, state regulation, qualifications of voters, bond issues, and method of assessment. For the purpose of illustrating the points of difference, this comment will be restricted to legislation in California, Colorado, Idaho, Nebraska, Oregon and Wyoming, as they are the states in which the movement has been most active.

The organization petition must be signed in California, by a majority of the holders of title, representing a majority in value of the land; in Colorado, by a majority of land owners, representing a majority of area; in Idaho, by fifty or by a majority of holders of title, representing one-fourth of acreage assessable; in Nebraska, by a majority of land owners resident in the state, owning at least ten acres, or holding five-year lease on 40 acres; in Oregon, by fifty or a majority of holders of title; in Wyoming, by a majority of the freeholders.

In order to carry an election on organization it is necessary to have a two-thirds vote in California and Idaho, a majority vote in Colorado, Nebraska and Wyoming, and a three-fifths vote in Oregon.

An investigation and report by the state engineer on the feasibility of the project before organization is provided for by California, Idaho, Nebraska and Wyoming. In all six of the states, the state engineer examines and reports upon the plans prepared by the district prior to issuing bonds for construction purposes. Wyoming is the only state making the approval of plans by the state engineer necessary before voting on bonds. In California, as previously stated, no bonds can be certified by the state until the plans have been approved by the bond commission. California irrigation district bonds now find a ready market at good prices. Much of the prejudice against such bonds, on account of the many failures under the original Wright act, has been overcome for the most part by the knowledge that the project was subject to approval by state officials. As a single district failure may cause a reversion to the old attitude of distrust, those interested in irrigation development should be willing to give to the state engineer, or commission, the right to prohibit the formation of a district if found not feasible, but all attempts in that direction have proved unsuccessful.

In California, any elector under the general election laws may vote at all district elections. In Colorado, the right to vote is restricted to the owner, or entryman, of agricultural or horticultural land, who must in addition be over 21 years of age, a resident citizen of Colorado, and must have paid taxes on land the year before. In Idaho, the voter must be an elector under the general election laws and must own land and reside in the district. In Nebraska, he must reside in the state and own ten acres or hold five-year lease on forty acres in district. In Oregon, he must be 21 years of age and own land in the district. In Wyoming, any freeholder may vote, an affidavit for the use of non-resident freeholders in voting being set out in the act.

In order to carry a bond issue an affirmative majority vote is sufficient in all of the six states excepting Idaho, where a two-thirds vote is necessary. The interest rate on bonds shall not be in excess of six per cent in all of the states, again excepting Idaho, where it shall not exceed seven per cent. Bonds must be sold at par in Idaho, and to the highest bidder in the other states, but for not less than 95 in Colorado and Nebraska, and for not less than 90 in Oregon and Wyoming.

In California and Nebraska, the lands within the district are assessed on an ad valorem basis—improvements being exempted. In Idaho the assessment is in accordance with the benefits. In Colorado, Oregon and Wyoming, the irrigable land only is assessed, and that at the same rate per acre.

The Constitutionality of Irrigation District Acts

Owing to the compulsory nature of the irrigation district enterprise, it was to be expected that litigation should be initiated immediately after the formation of the first California districts by the landowners whose lands had been included against their wish. The validity of the act was assailed on every possible ground, but was upheld by the Supreme Court of California and finally, in the celebrated case of Fallbrook Irrigation District v. Bradley (164 U. S. 112), by the Supreme Court of the United States. Extensive litigation has followed the inauguration of irrigation districts in other states, but the validity of the several acts has likewise been upheld. There seems to be no question, therefore, that the many provisions of the irrigation district acts are legally sound.

The report of the case of Fallbrook Irrigation v. Bradley is interesting not only for the opinion by the court, but also for the argument against the validity of the act given by Joseph H. Choate, who in his argument presents the view of a great number of Californians at that time in regard to the questionable novel features of the act. The following extract from Mr. Choate's argument shows what he thought of the new system:

> **This brings into view the unique and, as we believe, wholly unprecedented features of the scheme contrived by this act for the oppression of the farmers of California. We think that the statute books of all states and nations outside of California, prior to 1887, will be searched in vain, without finding another such example, and especially in view of the construction which has been given to certain details of this statute by the Supreme Court of California.**

Early Irrigation Districts in California

Irrigation Investigations of the United States Department of Agriculture has assembled much valuable data regarding the many districts formed immediately after the passage of the original Wright act of 1887. Mr. Frank Adams, in charge of Irrigation Investigations in California, has presented some of the data in his very commendable report on Irrigation Districts in California, 1887-1915. (Published as Bulletin No. 2, Department of Engineering, State of California.) The following statistical information was included in a paper prepared by Mr. Adams for the Commonwealth Club of California. It is

given here, as it so ably summarizes the fortunes, or misfortunes, of the districts of the early movement:

Forty-nine districts were organized, and of these only 25 ever issued any bonds.

The statement that practically all of the 49 defaulted in large amounts should therefore be reduced one-half.

Of the 24 districts that issued no bonds, none at this time has any outstanding indebtedness. Eleven have been legally dissolved. Twelve have not been dissolved, although they are not active. One, the Walnut Irrigation District, covering about 900 acres of land in Los Angeles County, near Whittier, has been active and successful from the date of its organization and has never defaulted in any way in payment of indebtedness.

Of the 25 that issued bonds, 7 have made some kind of a settlement and have no outstanding obligations as districts at this time. Two have made settlement, but still have small outstanding indebtedness that either has been declared illegal or can not be found. Four have made settlement by exchanging new for old bonds and are now active, and with the exception of one, whose reorganization is not yet complete and which therefore can not be judged, are active and successful and can undoubtedly be counted on to pay both bonds and interest as due. Five have compromise settlements pending. Seven have apparently been totally abandoned, with no plan of settlement as yet seriously taken up.

Where settlements have been made they have been so different that it is hard to explain them with sufficient brevity for the purpose of this paper, and reference is therefore made to the table that will be submitted. The lowest basis of settlement has been 30 cents on the dollar, and the highest between 80 cents and 90 cents. Several compromised at 50 cents.

Of the 7 districts that apparently have been totally abandoned, and for which no plans of settlement have yet been seriously taken up, at least 3 were wildcat land-promotion schemes, pure and simple, and although reported favorably by engineers of reputation, apparently never had engineering justification, chiefly due to lack of water. The outlook for them is not encouraging, although in time they will without question be cleared up in some way. This might also be said of the other four.

Operations Under Irrigation District Acts

Although twelve states had irrigation district acts in 1909, only eight had district projects irrigating land in that year, and only nine had projects either completed or under construction in 1910. The data for the following table have been taken from the Thirteenth Census, which is the latest complete compilation published. The table shows by states the total acreage irrigated in 1909, the acreage irrigated by districts in 1909, and the acreage included within districts in 1910.

STATE.	Total Acreage Irrigated in 1909.	Acreage Irrigated by Districts in 1909.	Acreage Included in Districts in 1910.
All States	13,738,485	528,642	1,581,465
California	2,664,104	173,793	606,351
Colorado	2,792,032	115,304	487,370
Idaho	1,430,848	140,930	329,796
Montana	1,679,084	412	6,640
Nebraska	255,950	76,448	91,076
New Mexico	461,718	.....	16,400
Oregon	686,129	1,500	5,980
Utah	999,410	8,455	10,802
Wyoming	1,133,302	11,800	27,050

It is apparent from a study of the above table that there was but little district development, up to 1910, outside of California, Colorado, Idaho and Nebraska. Since 1910, district activity has been far more pronounced.

At the close of 1916 in California the six districts in operation were irrigating 623,297 acres. Thirteen other districts had been organized. The total acreage included within the nineteen districts was 1,302,884. Most of the increase over the 1909-1910 table is due to the Imperial Irrigation District, which has taken over the system of the California Development Co., diverting water from the Colorado River. It comprises an area of 576,600 acres and in 1916 irrigated 333,724 acres.

According to the 1915-1916 report of the state engineer of Idaho, in 1916 there were thirty-five districts in Idaho, twenty-seven of which had submitted reports to the state engineer. The twenty-seven districts comprise a total of 383,050 acres, 249,200 acres of which were irrigated in 1916. Six of the eight districts not reporting have a total area of 97,118 acres, so that Idaho had in excess of 480,000 acres under district organization in 1916.

The 1915-1916 report of the state engineer of Oregon shows that in 1916 Oregon had seventeen districts covering approximately 416,400 acres and irrigating (in 1916) 32,200 acres, of which 23,000 acres were irrigated prior to the organization of the districts.

The successive state engineers of Colorado have been very frank and direct in their statements regarding irrigation districts in Colorado. The last report of the state engineer (1915-1916) contains a criticism which reads like those in reference to the early districts under the Wright act in California. Among other things, he says, "Such flagrant abuses were practiced under this law, so many districts were organized for no

other purpose than to assess lands to pay the salaries of officers of the district, that the depreciation of irrigation securities was inevitable. Promoters, aided and fostered by certain classes,—boomers, real estate men and so-called colonizers—loaded many acres of Colorado's lands to the hub with worthless irrigation securities." The report states that sound irrigation development is beginning to revive. It cautions the citizens of Colorado to be on the alert to safeguard irrigation securities in the future, so that confidence may be stimulated and financial assistance rendered to Colorado's many excellent projects.

The California Irrigation Act

In his 1915-1916 report, the state engineer of Oregon in commenting on the Oregon irrigation district act said: "At every session of the legislature, a whole flock of amendments to the law are proposed. Each district has its own pet scheme, which requires an adjustment of the statute." The comment will probably apply in every other western state. It certainly does in California, where proponents of projects not only have insisted upon special amendments to the irrigation district act, but have secured the passage of entire new acts to fit special conditions. So far has this tendency been followed, that Mr. Kinney, in criticising the many district acts in California, concluded, "About the only law that the state of California really lacks in the way of district law, relating to waters, is one upon the subject of the control and regulation of rain water before it hits the earth, and we have no doubt but that such a law will be enacted, upon our suggestion, at the next session of the legislature." (Irrigation and Water Rights, Pg. 3174.)

It is believed, however, that the California irrigation act, enacted in 1915 and amended and supplemented in 1917, will be of material assistance, especially in connection with the larger and more complicated projects. The act was originally passed to assist the proponents of the Iron Canyon project, in the upper Sacramento Valley, in co-operating with the United States Reclamation Service. It is now being used for the formation of a "conservation district" to embrace about 1,000,000 acres in the counties of Fresno, Tulare and Kings, susceptible of irrigation from the Kings River when regulated by the proposed Pine Flat reservoir.

The act not only provides for the formation of single irrigation districts but also for conservation districts to include irrigation districts, reclamation districts, drainage districts, and other political subdivisions organized to promote irriga-

tion, reclamation or drainage. It further provides that commercial irrigation enterprises and mutual water companies can share in the benefits of the district. Excepting the Carey act, there are irrigation enterprises of every type taking water from the Kings River. The act will allow the inclusion of all such enterprises within the one project, which will cover drainage, flood control and electric power development as well as irrigation.

The act provides an irrigation board of three members appointed by the Governor for terms of four years. The board has full control of each district formed under the act, from its initiation to the completion of construction work and actual operation.

The distinguishing features of the act are: the provision for a board of apportionment of three members appointed by the irrigation board to apportion the amount of water and power developed, and cost thereof, to each unit of the conservation district; the provision for levying assessment in accordance with benefits, and not on an ad valorem basis as in the ordinary irrigation district act; the provision making the decision of the irrigation board final after hearing on the report of the three assessors, appointed by the irrigation board; the provision for the listing and collection of assessments, and sale of land in case of non-payment, by the county officers in the same manner as county and school district taxes; the provision entitling each land owner to vote in person or by proxy, and to cast one vote for each acre owned; and the provision requiring the deposit of all money collected with the state treasurer, to be paid out by him upon the order of the irrigation board.

Irrigation Districts on Reclamation Service Projects

As noted in the previous chapter, the Reclamation act provides that, when the water-right payments have been made for the major portion of the lands, the management and operation of the irrigation works shall pass to the land owners, to be maintained at their expense under some form of organization acceptable to the Secretary of the Interior. The water users' association was the form of organization used until very recently. The association is simply a mutual water company in which one share of stock represents one acre of land.

The Reclamation Extension act of August 13, 1914, specifically mentions the irrigation district as one form of organization to be recognized by the Secretary. The present attitude of the Service is to use the irrigation district in preference

to the water users' association. There are two principal arguments in favor of such action—one in favor of the land owner and the other in favor of the government.

Under the water users' associations, the stock subscription contract is practically a first mortgage upon the land. Land owners under such associations have, therefore, experienced much difficulty in borrowing money for needed improvements. Under the irrigation district, there is no contract which will show in an abstract of title as a lien or mortgage. The assessments are levied simply as taxes, and the abstract will show whether such taxes have been paid or not. Banks and other loan agencies may, therefore, lend money with the assurance that their mortgage is the first lien.

From the government's view-point, the district is desirable, as the method of collecting annual charges is so well fixed and definite. Where one knows that in case of default his lands will be sold in an almost automatic procedure, he is far more careful about paying promptly than he is in meeting the ordinary stock assessment. Furthermore, some of the projects contain areas within their boundaries which are not "signed up" to the project and, therefore, are receiving benefits for which no payment is made. Where a district is organized to include a project, such lands can be included and thus made liable for assessments.

In the first edition of this book the view was expressed (pg. 141) that there was probability of conflict in using the reclamation fund for financing irrigation distr'cts, as the Reclamation act restricts the use of water to individual holdings of 160 acres and necessitates residence by the water user in the neighborhood of the land. The latter condition has been to a great extent removed by departmental interpretation, but the acreage limitation still stands. Idaho was one of the first states to amend its irrigation district act by providing that the directors of a district, instead of issuing bonds, may enter into a contract with the United States for the construction of the works under the terms of the Reclamation act. In Nampa & Meridian Irr. Dist. v. Petrie (153 Pac. 425), the Supreme Court of Idaho upheld a contract between the Nampa etc. District and the United States for the inclusion of the district lands as part of the Boise project. The two conditions of the Reclamation act, above mentioned, were pressed as reasons for declaring the contract unlawful. The Court held that the Warren Act of February 21, 1911, and the Reclamation Extension act of August 13, 1914, make no provision for residence upon the lands, and that the acreage limitation was not then

in question and would not be until the land, in excess of 160 acres held by one individual, was actually assessed for water which, under the Reclamation act, could not legally be delivered.

The Nampa etc. District and the Pioneer Irrigation District are both old districts included within the Boise project. The aim of the Service is to form districts to represent an entire project or a complete unit thereof. It has secured the amendment of the irrigation district act in most of the western states in order to facilitate such organization and co-operation. The Minidoka Irrigation District was organized July 22, 1913, and is now operating the north side of the Minidoka project. Districts have also been formed, to act as fiscal agent, or to take over the operation of parts of the project, on the Yakima project in Washington and on the Strawberry Valley project in Utah.

Congressional Act of August 11, 1916

The purpose of this act is to give a lien upon public lands and entered land, for which no final certificate has issued, within an irrigation district. The act does not apply to a district of which the major part is unentered land. Liens due to charges legally assessed upon unpatented entries may be enforced by the sale thereof in the same way as in the case of private lands. If the land thus sold has been withdrawn under the Reclamation act, no patent shall issue to the holder of the tax deed until satisfactory proof is made of reclamation and irrigation required by the Reclamation act, and the payments required by said act are also made. In case of sale of entered, but unpatented lands, not subject to the Reclamation act, the purchaser may secure patent upon payment to the local land office of $1.25 per acre, or such other price as may be fixed by law for such lands, and upon a satisfactory showing that the irrigation works have been constructed and that water is available for such lands. The purchaser, at time of application for patent, shall have the qualification of a homestead entryman or desert land entryman, and not more than 160 acres of said land shall be patented to any one purchaser.

No unentered land or entered land, without final certificate, shall be subject to the lien for district assessments until the Secretary of the Interior has favorably passed upon the sufficiency of the water supply and the feasibility of the project.

No public lands which were unentered at time of levy of assessment against them shall be sold for taxes, but the tax shall continue a lien upon the lands, and not more than 160

acres of such land shall be entered by any one person. When such lands shall be applied for under the homestead or desert-land laws, the application shall be suspended for thirty days to enable the applicant to present the proper certificate showing that the district taxes have been paid.

Nothing in the act shall be construed as creating any obligation against the United States to pay any of the charges, assessments or debts incurred.

The Future of Irrigation Districts

In the many decisions upon irrigation district acts, the district is held to be a "quasi municipal corporation." The Supreme Court of Idaho, accordingly, in Pioneer Irr. Dist. v. Walker (119 Pac. 304), held that the provisions of the Idaho irrigation district act, necessitating property qualifications by voters, are unconstitutional, as the state constitution forbids the imposition of such qualifications for electors, and irrigation districts, being quasi municipal corporations, are subject to the general election laws.

The Supreme Court of Oregon, in Payette-Oregon Slope Irr. Dist. v. Peterson (128 Pac. 837), refused to follow the Idaho Supreme Court, and its attitude seems the more logical. The Oregon Court recognized the districts as quasi municipal corporations, but held that they differ widely from any other quasi municipality in the powers conferred and the objects to be accomplished. A municipal corporation such as a city and quasi municipal corporations such as road districts and school districts are governmental, and all persons within their corporate limits are subject to their authority and are burdened or benefited by their acts. The irrigation district is thus distinguished from the others:

> Others than landowners have no possible interest in the irrigation districts as such, or in its financial management, nor right to a voice in the naming of its officers; and a non-resident landowner has exactly the same interest and responsibility as a resident, and is entitled to the same voice in the direction of its affairs. Districts within this statute can be distinguished from private corporations only by the fact that their organization is compulsory upon those not petitioning for it, and that the expense of maintenance is incurred and a large debt created, which are made liens on the land without the consent of the owner, payment of which must be made by compulsory assessment. No other elements of government or municipal proprietorship are involved.

The policy of allowing any elector within a district to vote at elections and of prohibiting from voting landowners in the district who are not resident electors, is one of the most objec-

tionable features of the irrigation district act in California and other states having similar provisions. As noted above, the new California irrigation act allows each land owner to cast one vote for each acre of land.

Regardless of objectionable features, however, the irrigation district is becoming the favorite method of organization for the larger projects. Its use by the Reclamation Service and the opportunity to extend its provisions to public lands under the congressional act of August 11, 1916, will be reflected in a very large increase in area affected, when the returns of the next census are published. In a previous chapter, it is stated that the mutual company is destined to be the controlling type in the operation of irrigation works. The statement is undoubtedly true when we distinguish between "private" and "public" systems. The district may be termed a "public mutual" enterprise. Whether the "private mutual" or the "public mutual" will be irrigating the larger total acreage ten years from now, is not a serious question. The point of importance is that the "mutuals" control.

CHAPTER XIII

THE DESIDERATUM IN LEGISLATION REGARDING THE PUBLIC WATERS

The legal principles governing the use of water are the result of judicial decisions rather than legislation. Just as the doctrine of riparian rights is the outgrowth of the old common law as interpreted by the English courts, so the doctrine of prior appropriation is the outgrowth of the customs of the pioneer miners and irrigators as interpreted by the western courts. To continue to exist as common law, a legal principle must be reasonably adapted to the time and the place. The strictly arid states long ago abrogated the doctrine of riparian rights because it was wholly unsuited to conditions there existing, and California and Washington have refused to follow the English common law rule of percolating waters for the same reason.

Riparian Rights

The western states still tolerating even a modified riparian doctrine are only semi-arid and, naturally, the older and larger cities of such states are in the semi-humid section. It is therefore not strange that their supreme courts still find some virtue in the doctrine. Where irrigation is not the first aid to successful agriculture the riparian doctrine seems rational, and it would be at least unusual for one residing in a non-irrigated section and trained in the common law of the books to consider the doctrine of prior appropriation as other than a makeshift of frontier camps. During the last two decades, however, irrigation has been given a tremendous impetus, and the great size of the many projects undertaken in the semi-arid states has done much to show the unsuitability of the riparian doctrine.

The doctrine of prior appropriation, on the contrary, is proving more and more adapted to the needs of growing communities with restricted water supplies. The cardinal principle being reasonable use and the elimination of waste, no ditch is allowed to divert water unless there is actual immediate need for the use thereof. The popular notion of the exclusive ownership of water finds no authorization in the books. On the contrary, expressions like the following show the attitude of courts:

> It is the policy of the law that the best methods should be used and no person allowed more water than is necessary, when properly applied, and thus a larger acreage may be made productive by its extended application. Little Walla Irr. Union v. Finis Irr. Co.—Ore.—124 Pac. 668.

As an instrument of the best development, the superior claim of the doctrine of prior appropriation is perhaps nowhere better shown than in the case of Schodde v. Twin Falls Land & Water Company, decided by the Supreme Court of the United States on April 1, 1912 (32 Sup. Ct. Rep. 479). The plaintiff owns lands riparian to the Snake River in Idaho, and by means of a number of water wheels, from 24 to 34 ft. in diameter, elevated the waters thereof to irrigate his lands. The defendant company, by the construction of the Twin Falls dam and the consequent back water, destroyed the current and rendered his wheels useless. If the doctrine of riparian rights were recognized in Idaho the remedy of the plaintiff would have been unquestioned, but the doctrine was long ago abrogated. The Supreme Court in affirming a judgment of dismissal quotes with approval the following words of the trial Court:

> It is unquestioned that what he has actually diverted and used upon his land, he has appropriated; but can it be said that all the water he uses or needs to operate his wheels is an appropriation? As before suggested there is neither statutory nor judicial authority that such a use is an appropriation. Such a use also lacks one of the essential attributes of an appropriation—it is not reasonable.

The opinion is but another illustration of the point that the doctrine of prior appropriation aims towards the highest use and greatest development, and is adapted to the time and the place.

Numbers of suggestions have been made regarding methods of limiting or abolishing the riparian right by legislation. The California Water Commission act provides, in section 11, that the non-application of water to beneficial purposes upon riparian lands for any continuous period of ten successive years shall be deemed to be conclusive presumption that the

use of such water is not needed upon said lands. This provision flies in the face of the principle, so often reiterated, that the riparian right is not created by use and it does not cease with disuse. The California Supreme Court itself, however, by way of dictum only, has said:

> It may well be said there is room for and even need for legislation which will require riparian proprietors to exercise their irrigation rights in the use of water within a limited period, or to be decreed to have waived these rights. Other similar legislation making for the general good will readily occur to one's mind. But it is not the province of this court to legislate, and it would be abhorrent to justice now to say to an upper riparian proprietor, who has rested in security upon the rights which this court has over and over again declared to be his, that he has lost those rights through no fault or failure of his own, but simply because he has not seen fit to use the waters upon his riparian land. We take it that the legislature itself would be slow so to decree without giving the riparian proprietor an opportunity to make a beneficial use of the waters. We are asked to do this without giving him such an opportunity. This would be equivalent to this court erecting a statute of limitations against an upper riparian proprietor and in the same breath decreeing that it had barred all his rights. (Miller & Lux v. Enterprise, etc., 47 Cal., Dec. 1, 7. A rehearing was granted, and the final opinion, 169 Cal. 415, does not contain the above dictum.)

It seems certain that legislation limiting the time within which action may be brought by a riparian owner against appropriators will be upheld as valid. Thus far no western state has passed such legislation, although bills to that effect were introduced at the 1917 session of the California legislature.

The 1917 California legislature passed a measure, generally known as the Hawson Bill, which should materially assist appropriators in injunction cases brought by riparian owners. The act provides that in an action brought by a riparian owner to enjoin the diversion or use of water by an appropriator, the latter may set up in his answer that the water is for the irrigation of land or other public use, and also set forth the amount to be diverted, nature, place and time of use, and show by reference to the discharge of the stream that the proposed diversion may be made without interfering with the actual and necessary uses of the plaintiff. The answer must also state that the defendant desires the court to ascertain and fix the damages, if any, that will result to the plaintiff or to his riparian lands from the diversion. The act further provides certain details regarding the trial and appeal, if desired, after which upon the acceptance by plaintiff "of such amount so awarded or upon the affirmation of such decis-

ion on appeal so that such judgment shall become final, the defendant shall have the right to divert and appropriate from such stream, against such plaintiff and his successors in interest, the quantity of water therein adjudged and allowed."

Percolating Waters

California, Washington and Idaho are the only western states which do not follow the common law rule that percolating waters belong to the owner of the soil. The Supreme Courts of California and Washington have departed from the common law, and have laid down a new rule somewhat analogous to that of riparian rights in the surface streams. Under the new rule, the owner of land overlying a body of percolating water is entitled only to a reasonable use of such upon his overlying land, and may enjoin any diversion of such water to lands not overlying which will interfere with his reasonable use.

The Supreme Court of Idaho has held that percolating waters are subject to appropriation in the same way that the waters of surface streams are. The legislation governing appropriations in Idaho, therefore, can be considered as extended to percolating waters.

The only need for general legislation regarding percolating waters is a provision allowing courts, in their discretion, to refer cases involving percolating waters to the state engineer or water commission for investigation as referee or special master. Scientific and technical questions, which arise in the determination of the source and amount of percolating waters, are so many and so difficult to positively answer that the ordinary court procedure, necessitating the introduction of evidence by expert witnesses, results in a mass of data most confusing. An office like that of the state engineer or water commission can collect these data at first hand and fully understand the conditions under which such data are assembled. That litigants fully appreciate this fact is well illustrated by a case pending in California, brought by the Alameda County Water District against the Spring Valley Water Company. The Water Company, for the purpose of augmenting its supply of water for the City of San Francisco, is now constructing the Calaveras reservoir on a tributary of Alameda Creek. The Water District comprises within its limits lands lying on both sides of Alameda Creek, in the so-called Niles Cone. It is claimed that the water bearing strata underlying such lands are supplied by the waters of Alameda Creek, and that the proposed storage by the Water Company will substantially lessen such underground supply and result in damage to the

land owners. Both the Water Company and the Water District collected much physical data, but, in attempting to effect a settlement, decided that the data were insufficient "for an intelligent and fair solution of all the questions involved, and it is desired to obtain such data under the direction of some competent and disinterested board." The Company and District, therefore, entered into an agreement dated September 1st, 1916, providing that the State Water Commission of California shall direct the work of obtaining the necessary physical data for a three year period, and that the expense of such work, not exceeding $10,000 per year, shall be paid by the Water Company. The agreement further provides that at the end of the three year period, or sooner if the commission concludes that it has sufficient data, the "commission shall proceed in conference with the parties to fix and determine the terms and conditions * * * upon which such storage and additional diversion may be made * * *." The agreement further provides that the settlement so fixed and determined shall be final and conclusive upon the parties.

Irrigation Versus Navigation

As congress has the superior right to legislate regarding the navigability of streams which may be used in interstate commerce, any conflict between the interests of irrigation and navigation rising out of the diversion of the waters of such streams can not be anticipated and avoided by state legislation. In certain parts of the west, especially on the Colorado and Sacramento Rivers, the clash is probable. As action by congress in favor of irrigation would be difficult to secure and of doubtful validity, the question must be settled by the communities involved. The investments in irrigation works and the industries dependent thereon are increasing each year, while other means for transportation are leaving little call for that by water.

As the War Department in order to maintain the navigability of a river may stop the diversions from the tributaries as well as from the main stream, it is clear that in most cases the material wealth of whole counties might be jeopardized. It seems certain, therefore, that public policy demands diversions of the summer flow even to the detriment of navigation, and that such conflicts will be adjusted to so allow.

Capitalization of Water Rights

As previously stated, Section 20 of the California water commission act forbids the capitalization of water rights initiated under the act. The provision is not found in the other

western codes, principally for the reason that it was formerly generally understood that water rights, at least for irrigation purposes, could not be capitalized. The decision of the United States Supreme Court in the San Joaquin case (233 U.S. 454) is to the contrary, however, and will probably apply in all states where the state supreme court has not decided otherwise. Regardless of the attitude of the state courts, it is recommended as a precautionary measure that every western state adopt positive legislation forbidding the capitalization of water rights initiated after its passage. The same action should be taken regarding rights of way over state lands and franchises to occupy streets. Development should be stimulated in every practical way by the nation, states, cities and other political units, but the privileges granted should be so conditioned that capitalization thereof is impossible.

Legislation Regarding Appropriations

Every western state has statutes fixing the procedure to be followed in making appropriations. Arizona and Montana still follow the practice of posting notices. Excepting Colorado, the remaining irrigation states have a central office in which applications for permission to appropriate water are filed and the conditions fixed under which the rights may be perfected. Most states give this central office the right to reject an application for specified reasons—like lack of water supply, interference with prior rights, or detriment to the public welfare. Such statutes have been in force for over twenty years and there are practically no cases showing an abuse of the power of rejection.

A number of states have the central office publish the application so that all interested may be heard in regard thereto before final action thereon. This practice has proved of great benefit to both the old and the new appropriators. It gives present users an opportunity to know about and protest against any appropriation which might prove detrimental to their own, and it shows the intending appropriator the true situation before he expends any money in construction. Every state while following the old method had instances of the construction of works whose operation was enjoined immediately after completion. The new method aims to eliminate such waste of time and money.

It must be emphasized that the new legislation controlling appropriations is based upon no new legal principles. It simply offers an improvement in the details of administration—just as a modern auditing system makes it possible for a business house to more easily control its operations. Under

the new system the appropriator is under state control from the initiation to the completion of his project. It is a control, however, which protects, rather than prohibits, bona fide projects. Under the old method of posting notices, the records were useless as evidences of work actually done, and one was never certain of the status of his right during construction.

In those states having no special legislation for the determination or adjudication of existing rights to the stream flow, the status of the various rights is settled only by ordinary court action. It is, therefore, possible to have dozens of law suits over water rights on a stream without all of the water users being brought into any one of them. The new system provides a method for the determination of all rights in a single proceeding. Colorado, Idaho, Utah, North Dakota, South Dakota, Oklahoma, New Mexico and Washington provide for adjudications directly by the courts, and Wyoming, Nebraska, and Texas determine rights through a non-judicial officer or board. Oregon, Nevada, and California combine the two by providing for a determination by a board which must be affirmed or modified by a court before becoming final.

The first edition of this book ended as follows:

"As the states in which rights are determined by a board have secured the best results, and, as the Oregon method meets the approval of those who think such determination a strictly judicial matter, it is recommended that the Oregon method be followed in the states not included in the enumeration above. So far as bringing all claimants into one action is concerned many courts have held that they now have that power and have refused to consider the merits of a case until all claimants were made parties. The newer legislation, therefore, simply insures this being done in every case."

"Although one may be successful in the ordinary lawsuits regarding water rights in those states in which the new legislation has not been adopted, he is without protection, other than further court action, if the wrongful diversions continue. Here again the abler courts have taken the matter into their own hands and have appointed officers to divide the waters in accordance with the decree and at the expense of the parties interested. The new legislation cares for the distribution by dividing the state into districts with water commissioners to apportion the waters therein in accordance with the determination of rights. The system was first introduced in Colorado in 1879 and has been accepted by all the western states with the exception of Arizona, California, Kansas, Montana, Texas and Washington."

"The new legislation regarding water rights by appropriation effectively provides for the three essentials: first, the determination of existing rights; second, the distribution of water among those entitled to its use; and third, the control of the acquisition of new rights. It is working so well in the many states in which it has been adopted that there is no good reason why it should not be generally accepted. It is certain that a more general knowledge of its many good points would dispel the existing prejudice against any change in such matters and bring about the desideratum in legislation regarding our public waters."

The quoted paragraphs were written five years ago. Since then, California, Texas and Washington have adopted "water codes," and Kansas has legislated regarding new appropriations and has created a water commission to study and recommend water legislation. Only Arizona and Montana remain, and each attempted to pass new water laws at the 1917 legislative session. It is believed that the interest is sufficiently great in the two states to result in a successful issue in the near future. It seems, therefore, that the goal is in sight.

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