The Development of the Law of Waters in the West*

It is necessary to define and limit the subject of this address. The region known as the West is frequently understood to include all the territory west of the Allegheny mountains. This embraces at least twenty-three states, each having laws on nearly every subject relating to land that are in some respects different from those of the others. The part of it which was acquired from Mexico in 1848 by the treaty of Guadalupe Hidalgo is divided into five states, not including parts of Colorado and Wyoming, and each of these also has laws on the subject that differ from the others in some particulars. I am not familiar with the details of these laws in any of the states except California. It was the state first created out of the Mexican acquisition and in it the law of waters first became important enough to be the subject of judicial decision. The laws of the neighboring states have generally followed the course of decision in California. I shall, therefore, confine myself to the discussion of the law of waters in California.

The development of that law in California is a part of the history of the development and growth of the state. The first industry pursued here, that of placer mining, required the liberal use of water to separate the gold from the soil, sand and gravel in which it was embedded. It was confined to the mining regions. The later and more widespread industry of agriculture required still larger quantities of water to grow the annual crops, trees and vines to which the climate and soil were so well adapted. The recent use of water to produce electrical energy adds another valuable use to that element. The increase in population and the corresponding increase in these various industries have produced

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a demand for water which it has taxed all possible sources to supply. The controversies arising from these conditions have been taken to the courts and have compelled decisions upon various phases of the law of waters. Our reports contain more decisions on that subject than on any other.

In determining this law the courts have had to take into consideration the different purposes for which water is used, the various methods of applying and diverting it, and the different sources from which the water can be obtained. The subjects of the decisions on water law may be classified as follows: 1. The use of water for mining purposes on government land, giving rise to a peculiar phase of the development of the law, which terminated at the close of the Civil War and with the passage of the act of Congress in 1866, presently to be described; 2. The use of water for the irrigation of land, and its diversion from streams on land in private ownership; 3. The extraction and use of the subterranean supplies of water. Another use has recently begun; the impounding of water in reservoirs for the double purpose of producing electrical energy, and conserving the run-off during the rainy season and while the mountain snows are melting, for use in irrigation after it has passed through the power plants. The law with regard to this use, in so far as it may require any modification of settled rules, is now in process of development and it does not come within the scope of a paper devoted to the past. The first subject to be discussed, therefore, is the law regarding the use of water in the mining regions during the first sixteen years after the settlement of the state in 1849.

No more spectacular migration of human beings was ever known in history than that of 1849 from all parts of the world to the gold-bearing lands of California. They came from everywhere, but chiefly from the eastern part of the United States. They found a country different in topography, and in climatic conditions, from those from which they came. All were seeking gold. The only method of obtaining it that was feasible, under the existing circumstances, was that known as placer mining. The miners began to arrive in the summer of 1849, and they found the streams very low, many of them dry. It was only where streams were flowing that they were able to obtain any satisfactory results from their operations. As their numbers increased from year to year the demand for running water in the mining regions became very great. Rights to take water from the
streams soon became very valuable. Naturally disputes arose concerning such rights.

The conditions were novel to these people. There seemed to be no owner of the land. It belonged to the United States, but the national government had not even surveyed it and had no persons in actual control of it. It was all unoccupied. There was no known law to govern the rights of the persons desiring to extract the gold from the land and use the water for that purpose. There was no government, no law and no authority. In these circumstances the early adventurers had to form their own government and frame and enforce their own laws in such rude fashion as the conditions permitted.

Those who had come from the eastern part of the United States were in such numbers that they dominated the situation. Belonging to the Anglo-Saxon race, accustomed to conditions where law and order prevailed, and finding themselves in a region previously uninhabited and without any government, they followed their natural habits, inclinations and intuitions, and immediately sought to make local regulations for the preservation of law and order and for the protection of such rights as were generally recognized, until a provisional government should be provided by the United States. Mining districts were formed and in each of them mining rules were adopted at meetings of the inhabitants of the territory included in the district. These rules were generally accepted as law and were enforced by such informal tribunals as the inhabitants instituted under the exigencies of each particular occasion. The regulations were not precisely the same in all districts. Either the different topography or the different ideas of the inhabitants of the several districts caused somewhat different rules to be adopted and established in different places. Practically no attention whatever was given to the subject of real ownership of the land on which the miners settled. No person appeared to claim ownership. If the roving tribes of Indians found in the country had any sort of possession or claim, the miners gave it no thought, and they were wholly disregarded. The rights of the miners were those of the possessor, only, and such possession was the sole foundation and evidence of their title to the land they occupied, to the water they used in mining, and to the gold which they obtained thereby.

The influx of population was very rapid. According to Mr. Hittell the persons arriving during the year 1849 numbered one
hundred thousand. He justly adds that a large majority of them "were Americans, trained in American schools, imbued with American principles and included some of the choicest spirits from every section of the United States." It soon became evident that a local government of the territory should be organized. General Bennet Riley had been appointed provisional governor by the President of the United States. In pursuance of a proclamation issued by him a convention to organize a state government met and prepared a constitution which was ratified by popular vote on November 13, 1849. The actual admission into the Union did not take place until September 9, 1850, but the new state government, without awaiting federal authority, immediately upon the adoption of the constitution, organized and took control of local governmental affairs. No territorial government was ever formed for California. The judicial department provided by the constitution included a supreme court consisting of a chief justice and two associate justices, all to be elected by the people for a term of six years. The legislature was empowered at its first meeting to elect the justices of the court and classify them so that one should go out of office every two years. Under this authority justices were elected on December 22, 1849, and they organized as a court in March, 1850.

Prior to the treaty with Mexico in 1848, property rights were governed by Mexican law. After that treaty and until California was admitted into the Union, the law of Mexico continued in force with respect to private rights of property, except in so far as it was changed by the public authorities of this country. The first volume of our reported cases contains many decisions applying the Mexican law to past transactions. On April 13, 1850, the legislature enacted a law declaring that the common law of England, so far as it was in harmony with the state and federal constitutions, should be the rule of decision in this state.

The supreme court was thereupon confronted with the problem of determining the rights of contending parties to the use of the waters of the streams in a country which had been previously subject to the almost unknown law of Mexico and which had suddenly been transformed into a country governed by the common law, where the real owner of the land was for all practical

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1 Hittell's History of California, p. 700.
2 People v. Folsom (1855) 5 Cal. 379; Wells v. Stout (1858) 9 Cal. 494.
purposes absent and indifferent, where the people had come from
different countries and were strange to the land, the climate and
to each other, and where the principal source of litigation in
regard to the use of water was the conflicting claims of miners
to the waters they were diverting, or claiming the right to divert,
from the streams adjacent to or near their mining claims.

The common law of England included the doctrine of riparian
rights; a doctrine naturally growing out of the well known prin-
ciples of that law as to the right of private property in land
owned in fee simple. An entry on land without permission of
such owner, whatever the motive or purpose, was a trespass, at
common law, and the owner had the right to prevent it
by
force as was necessary to accomplish that purpose. Consequently,
except with respect to navigable streams, the several owners of
the lands bordering upon the streams were, under that law, the
only persons who could have or enjoy the use of the water run-
ing therein, or claim any right thereto, for no other person could
have access to the streams either to take or use the water. These
rules automatically protected the abutting owners in the exclusive
use of the water, and they are the foundation of the riparian
right. But in this strange country the owner of the land, appar-
ently by design, remained absent and refrained from interfering
with the possession of the land by the miners, or with the use of
the waters thereof. The disputes were all raised by persons who
had no real ownership in the water which they were using and
of which, by virtue of that use, they claimed to be in possession,
and the real owner was not brought into the controversy. The
problem of the court was therefore directed mainly to the best
and most appropriate application of the general principles of the
common law to the anomalous conditions existing in the mining
regions, conditions wholly unknown in the countries in which, up
to that time, the common law had been administered. There were
no specific common law rules that had ever been applied in those
countries to the peculiar conditions and controversies existing and
arising in the mining regions of California and the only recourse
was to its general principles relating to possessory rights.

The right of a person who did not own land on a stream, to
divert water therefrom for use on non-riparian land, had received
little attention and satisfactory authority upon that subject was
wanting. The laws of Mexico on the subject were not well
known and its safeguards for the protection of private rights,
being derived in the main from the arbitrary methods of the ancient Spanish rule, were not adapted to the habits and preconceived ideas of Anglo-Saxon races. The rights of possessors of the land gave comparatively little trouble. In the first year the court held that the Mexican law and the common law alike secured to one who was in peaceable possession of land a right thereto superior to that of any mere intruder or trespasser, and that proof of such possession prior to and at the time of an intrusion thereon was sufficient to defeat or oust the intruder. The question of water rights was naturally more complex. Three years passed before any disputes over water reached the supreme court. The first case on that subject, decided in 1853, was a controversy between two appropriators for mining purposes. Neither claimed as a riparian owner. The court nevertheless looked to the common law authorities on riparian rights and found there the doctrine that the riparian owner had the right to the reasonable use of the water during its passage over his land, and no title to the corpus of the water, and that he could not reclaim the water after it had passed his boundaries. From these principles it concluded that where a miner diverted water from one stream, and, after using it for mining purposes, turned it into another stream, he thereby lost all right to it and could not retake it from the second stream against the will of another miner whose dam was on the second stream below the place where the additional water was turned into it. This decision was apparently based on the idea that the mere turning of the water into another stream, after having once used it, was conclusive evidence of abandonment, and that it gave one who had prior rights to divert the natural waters of the latter stream a right to have the artificial increase continued for his benefit. Five years later this decision was virtually overruled and it was declared that the prior right to the use of the natural water of a stream did not entitle the person to the exclusive use of the channel, and that the bed of the stream could be used by others as a channel for conducting water provided that they took out below no more than the quantity they had added to the stream above, less the loss by evaporation and seepage. This has ever since been the established law.

3 Sunol v. Hepburn (1850-51) 1 Cal. 260; Woodworth v. Fulton (1850-51) 1 Cal. 308; Brown v. O'Connor (1850-51) 1 Cal. 421.
5 Butte etc. Co. v. Vaughn (1858) 11 Cal. 151; Hoffman v. Stone (1857) 7 Cal. 46.
The difficulties encountered by the court in its consideration of these questions are expressed in some of the opinions. Some of these expressions are interesting. In the second case on the subject, decided in January, 1855, Justice Heydenfelt delivering the opinion of the court, said: "In this state the larger part of the territory consists of mineral lands, nearly the whole of which are the property of the public," and with obvious reference to the rules and customs of the miners he added:

"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 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."

In a case decided two years later, Chief Justice Murray said that the former decisions in regard to the right to appropriate water from streams for mining purposes

"have been based upon the wants of the community and the peculiar condition of things in this state (for which there is no precedent), rather than any absolute rule of law governing such cases. The absence of legislation has devolved on the courts the necessity of framing rules for the protection of this great interest, and in determining these questions, we have conformed, as nearly as possible, to the analogies of the common law."

Later in the same year, in a case involving the respective rights of successive appropriators from the same stream, and the pollution of the water by the upper appropriator, Justice Burnett made a fuller statement on the subject as follows:

"It may be said, with truth, that the judiciary of this state, has had thrown upon it, responsibilities not incurred by the courts of any other state in the Union. In addition to those perplexing cases that must arise, in the nature of things, and especially in putting into practical operation a new constitution and a new code of statutes, we have had a large class of cases, unknown in the jurisprudence of our sister states. The mining

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6 Irwin v. Phillips (1855) 3 Cal. 146.
interest of the state has grown up under the force of new and extraordinary circumstances, and in the absence of any specific and certain legislation to guide us. Left without any direct precedent, as well as without specific legislation, we have been compelled to apply to this anomalous state of things the analogies of the common law, and the more expanded principles of equitable justice. There being no known system existing at the beginning, parties were left without any certain guide, and for that reason, have placed themselves in such conflicting positions that it is impossible to render any decision that will not produce great injury, not only to the parties immediately connected with the suit, but to large bodies of men, who, though no formal parties to the record, must be deeply affected by the decision. No class of cases can arise more difficult of a just solution, or more distressing in practical result. And the present is one of the most difficult of that most perplexing class of cases. The business of gold-mining was not only new to our people; and the cases arising from it, new to our courts, and without judicial or legislative precedent, either in our own country or in that from which we have borrowed our jurisprudence; but there are intrinsic difficulties in the subject itself, that it is almost impossible to settle satisfactorily, even by the application to them of the abstract principles of justice. Yet we are compelled to decide these cases, because they must be settled in some way, whether we can say after it is done, that we have given a just decision or not."

The decision was that the incidental pollution of the water by the upper appropriator in his mining operations, to the detriment of the lower one, was not an actionable injury. In the case next following it in that volume of the reports, the decision was overruled on this point, and Justice Burnett, in concurring therein, stated that the opinion in the first case "should receive some qualification."

During the period preceding the year 1866 large diversions of water had been made from the streams of the mining regions in this state, canals many miles in length had been constructed to carry the water to the place of use or to sell it to the miners along its course, great sums of money had been invested and property had been acquired which was of great value, if the possessors had a valid title thereto. This was done in reliance upon the general understanding of all concerned that the United States, as the owner of the land, acquiesced in these uses of its property

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8 Bear River Co. v. York Mining Co. (1857) 8 Cal. 332.
9 Hill v. King (1857) 8 Cal. 338.
and would not interfere to take it away from those who had thus occupied, developed and improved it, or deprive them of the products of their efforts. As a result of the labors of the courts under the difficult conditions just referred to a system of law had been established and was being administered, whereby the rights of appropriators of water from the streams of the public land, as between claimants not in privity with the riparian owner, were considered and determined in a reasonably satisfactory manner.

The principles so established during this period may be stated generally as follows: The waters of these streams on the public lands of the United States were all subject to appropriation at any time by any person who proposed to devote the water so taken to a beneficial use. The making of a diversion with such intent and for such purpose would vest in the diverter, at once, the right to use the water. No length of time of such use was essential to the acquisition of the right. The water was treated as property having no owner. The rights of the United States as riparian owner of the abutting lands were completely ignored. With respect to contending appropriators of water from the same stream, he who was first in time was considered superior in right. Such right vested by relation as of the time when the appropriator began the actual work of constructing his diversion works and ditch for that purpose, provided the work was done in such a manner as to be visible and to manifest to others his intent and purpose to prosecute the work to completion, and provided further, that he did so and actually took and used the water. The right so obtained was a right to only so much of the water as was beneficially used. The owner of such right was entitled at any time to change the place of diversion or the place of use, if the rights of others were not impaired thereby. These principles have not been changed by subsequent decisions.

The existence of riparian rights was recognized by the court in a few cases where a reference thereto seemed appropriate, or where the law on that subject illustrated the particular case; but no case had arisen in which that law was considered as important to the decision.

The titles to all this valuable property were not settled by the

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decisions of the state court. No statute of limitations would run against the United States, nor could title by prescription be acquired against it by any period of adverse possession. The large interests in property of this character would have been in great jeopardy, if the federal government had chosen a policy of hostility to the taking of gold from its lands such as has since been manifested with respect to the taking of coal and oil. Fortunately for the miners, and for the development and progress of the State of California, a different policy was adopted. On July 26, 1866, Congress enacted a law recognizing the possession of the miners as lawful, virtually acquiescing in the previous extraction of gold from the lands of the United States, and, so far as these lands and the United States were concerned, sanctioning and declaring lawful the claims to the water rights then acquired or thereafter to be acquired in the streams on the public lands, provided such claims were of a character which had been "recognized and acknowledged by the local customs, laws, and the decisions of the courts."\textsuperscript{12} By the supplementary act of July 9, 1870, it was provided that all homestead and pre-emption claims, and all patents granted for public land, should be subject to rights then or thereafter acquired as specified in the act of 1866.\textsuperscript{13}

By these acts all conflict between the claimants of water under appropriation from streams on the public land and the United States as owner of the land bordering on the streams, was eliminated and terminated, and the danger of interference with such rights by the federal government was removed.

These acts mark the termination of the first stage of the development of water law in California. The law as then established related almost entirely to the use of water taken from streams on the public domain for mining purposes. The use of water for irrigation was of little importance in the mining regions. The value of the alluvial soils in the large and comparatively level valleys of the state for agricultural purposes was then just beginning to be realized. They had been generally supposed to be valuable only for grazing and a little later only for grain farming. In a few places vineyards had been planted to grow grapes for making wine, and in southern California irrigation had been practiced to a limited extent for growing fruit. There had been enough water for the small needs of this character, and the relative rights

\textsuperscript{12} 14 U. S. Stats. 253, § 9.
\textsuperscript{13} 16 U. S. Stats. 218, §17.
thereto of the riparian owner and the appropriator for use on other lands had not as yet become important.

About this time a class of immigrants began to arrive who intended to engage in agriculture. In a few years the value of water for irrigation, and the necessity of irrigation for the production of anything except grain became manifest, especially in the San Joaquin Valley and in southern California. Henry Miller and his partner Lux, known as Miller & Lux, had acquired large bodies of land in Kern County in the San Joaquin Valley. James B. Haggin and Lloyd Tevis had also acquired a large area of land in that county. Haggin & Tevis began to construct canals for taking out the water of Kern River to irrigate lands not riparian thereto. The lands of Miller & Lux were lower down and bordered on the stream or on sloughs diverging from it, and the diversions of Haggin & Tevis diminished the flow of the water of the stream to the Miller & Lux lands, on which they had begun to use it to irrigate their lands for alfalfa and other crops. Along Kings River, the next important stream emerging from the mountains north of the Kern, large canals were made and water diverted therein to non-riparian lands for irrigation, and colonies of fruit farmers had been established along the canals. The course of the decisions above mentioned in regard to the rights of appropriators, and the long continued practice in the mining regions of diverting water from the streams without asking leave from the riparian owner, had accustomed the people to the notion that riparian rights were not important, and the idea had become prevalent that they were not suited to our conditions and had therefore ceased to exist. The Civil Code, enacted in 1872, in a chapter on that subject, had codified some of the rules of law previously established, regulating the right to appropriate the water of running streams. The last section of the chapter recognized the existence of riparian rights by the declaration that "the rights of riparian proprietors are not affected by the provisions of this title." Litigation between the riparian owners and the appropriators had begun in the counties of Tulare and Fresno, over the waters of Kings River, and in the County of Kern between Haggin & Tevis and others, claiming as appropriators, and Miller & Lux, with others, claiming as riparian owners. The action between the last mentioned parties was begun in the year 184 Part IV, title VIII, §§ 1410-1422.
1879\textsuperscript{15} and the other actions soon afterward. The importance of the question, the very large interests involved, and the growing demand for water, soon caused the controversy to develop into a political contest. The great wealth of the parties to the action in Kern County had the effect of centering the political discussion upon that case. The discovery that section 1422 of the Civil Code apparently purported to preserve the existing but almost forgotten riparian rights, directed the main political attack to the repeal of that section. Shortly before the beginning of the political campaign in 1884, the case of Lux v. Haggin in Kern County was decided by the Superior Court of that county in favor of the appropriators, Haggin & Tevis. Both of the contending parties doubtless believed that the political aspect of the case was important, and others throughout the state, especially in other parts of the San Joaquin Valley and in southern California, were soon advised of it. The litigants perhaps hoped that the political agitation might influence the decision of the Supreme Court, where the case was then pending on appeal. Public sentiment, so far as it found expression in 1884, was entirely in favor of the appropriators. Conventions were held and resolutions adopted condemning the doctrine of riparian rights and section 1422. The discussions in general indicated that, in the usual superficial method of reaching conclusions, the people believed that the sole foundation of the riparian right was the enactment of that section. An urgent demand was made to elect members of the Legislature pledged to repeal it. The more absorbing interest of the people in the presidential election of that year probably frustrated that effort. At all events, the legislators then elected, although pressed to act in the matter, failed to do so and section 1422 remained on the statute books. The decision of the Supreme Court in the case of Lux v. Haggin was rendered on April 26, 1886.\textsuperscript{16} There had been several previous decisions in which the existence of riparian rights had been declared and in which such rights had been enforced,\textsuperscript{17} but there had been no serious dispute on the subject, the cases had not attracted public attention, and it was not believed that the court would adhere to the previous rulings on the principle of \textit{stare decisis}, especially in view of the general discussion

\textsuperscript{15} Title Ins. Co. v. Miller & Lux (1920) 183 Cal. 71, 190 Pac. 433.
\textsuperscript{16} (1886) 69 Cal. 263 to 439, 4 Pac. 919, 10 Pac. 674.
of the subject in 1884. Probably no case ever came before the Supreme Court of California that was more fully argued or in which counsel of greater ability were engaged on the respective sides. The opinion was exceedingly exhaustive, covering 176 pages of the printed report. It is the longest opinion to be found in the decisions of our Supreme Court, and it elaborately treated every phase of the subject. It declared that the rights of the riparian owners to the use of the waters of the abutting stream were paramount to the rights of any other persons thereto; that such rights were parcel of the land and that any diminution of the stream against the will of the riparian owner by other persons was an actionable injury. The question was settled by that case and the riparian right has never since been disputed.

If the doctrine of the riparian right had been strictly enforced in all cases by the abutting land owners, it is obvious that it would have prevented all use of the waters of streams passing through lands in private ownership, on any non-riparian land. The rightful use of such waters on non-riparian land would have been impossible, for such land owners could not lawfully take out the water without infringing upon the right of every riparian owner along the stream to have the water flow as it was accustomed to flow. The opponents of the doctrine of riparian rights had pointed out these results with much emphasis and repetition in the political campaigns prior to the decision in Lux v. Haggin, and they are still referred to as evidence that the doctrine is contrary to a sound public policy in states having the arid climate of California. The obvious answer on the question of policy is that the objection comes too late, that it should have been made to the Legislature in 1850, prior to the enactment of the statute adopting the common law. When that was done, the riparian rights became vested, and thereupon the much more important public policy of protecting the right of private property became paramount and controlling. This policy is declared in our constitutions, has been adhered to throughout our national history, and it is through it that the remarkable progress and development of the country has been made possible.

Notwithstanding the existence of these vested rights, there has been a very general use of water on non-riparian land. This has been made possible by several causes. The most important and effective cause of a legal nature is the common law rule, now expressed in section 1007 of the Civil Code, that a title by prescription, good against all owners of private property, may be
acquired by adverse occupancy for the period of five years con-
tinuously. Other causes arise from natural conditions. Any per-
son who does not own land on a stream may obtain access to the 
water thereof by purchasing the right to do so from the owner 
of any parcel of riparian land. Usually the banks of the larger 
streams are so high that the owner of a small tract cannot bring 
the water upon his land, except by a diversion on land above him, 
to which, of course, he must have the consent of the owner 
thereof. Such owners frequently made little use of the water for 
irrigation and were indifferent to their riparian rights therein. 
Hence they usually made no objection to a diversion therefrom 
until five years had elapsed. The large diversions, almost with-
out exception, have been made near the point of emergence of 
the streams from the mountains, where land had little value for 
any purpose, and where the diversion would have little effect on 
the land near by and were so far from the land seriously affected 
thereby that they provoked no immediate opposition. In these 
ways and for these reasons, innumerable prescriptive rights to the 
use of the water of streams have been acquired from the riparian 
owners of private land, either without objection, or by successful 
litigation. As a net result the irrigated land in the state is almost 
all non-riparian, and the existence of the riparian right has not 
prevented the beneficial use of the greater part of the waters of 
the streams.

The decisions of water suits for many years following the case 
of Lux v. Haggin have dealt, for the most part, with the law of 
adverse possession, the interpretation and application of the afore-
said chapter of the Civil Code, the application of the principles 
of these laws to the particular facts presented in each case, and 
to definitions of the distinctions between the rights of riparian 
owners and the rights of persons claiming only by appropriation 
and use. Many rules of more or less importance on these sub-
jects have been established, but they do not essentially differ 
from the generally prevailing law on the subject and a discussion 
of them is unnecessary.

I now come to the third branch of my subject: the law relat-
ing to underground waters.

This question first became important in southern California, 
by which I mean the region south of the Tehachapi range of 
mountains. The influx of population and the demand for water 
for irrigation of orchards in that part of the state began to ex-
haust the supply of the surface streams more than thirty years ago and large areas of fertile land still remained barren for want of water. That country, and in fact all of California, is interspersed with places which the Spanish call cienegas, where in the rainy season of ordinary years, and all the year round in some of them during years of heavy rainfall, the surface of the ground has the appearance of a swamp. These are in reality ancient lakes which in the course of ages have been filled with the sand, soil, gravel and boulders that have been carried into them by the mountain torrents, or perhaps in some cases by glacial action. The loose material of which they are composed is usually of great depth and is saturated with water. They are natural reservoirs of water. The surface streams flow over deep beds of similar material, permeated with water from the bottom to the level of the surface of the stream, and this body of underground water, in such cases, supports the stream and is necessary to its existence. From these sources it was possible to obtain a large addition to the supply of water. When the average amount pumped out of the ground does not exceed the amount added to it by the average annual rainfall, such supply is steady and reliable. If it is taken from one of the underground reservoirs from which no surface stream issues there is no limit to the amount that could be pumped, except that it must not exceed the average supply from rainfall. But if it were taken from the underground water supporting a stream, it would inevitably diminish the flow of the stream, to the detriment of those entitled to its use.

The shortage of water and the increasing demand soon induced the use of pumps to obtain from these sources an additional supply. At first this was done in a small way with pumps driven by windmills. The perfection of the gasoline engine and later the development of electric power, made it possible to obtain a large supply with sufficient economy of operation to make it practicable.

The subterranean strata in which these waters lie are composed chiefly of sand and gravel, in which the water moves freely from place to place when impelled by the force of gravity. Consequently, if water is pumped from a well in such a stratum, a flow from the adjacent parts would set in at once to fill the voids thus created. Pumping from one well would sometimes materially lower the water level in another well a mile distant. In some places the water in these underground strata came from
higher levels in a layer of sand and gravel overlaid by a stratum of impervious material, thus creating a pressure which forced the water to the surface when the dense covering layer was pierced by a well, and by that means artesian wells would be produced. The flow from these wells would cease if too many wells were opened to the same source.

It is not difficult to perceive that these conditions would naturally cause conflicts of interest in this water supply and thus engender litigation. The first case of importance that arose concerned the preservation of the flow of water in the Los Angeles River, which then constituted the sole source of supply of the City of Los Angeles for the uses of its inhabitants. A private company proposed to construct tunnels and filtration galleries in what is practically the bed of that river, the effect of which would be that, without directly touching the surface stream or tunneling immediately under it, the water composing the stream would seep through the sand and gravel into the tunnels and the stream would in that manner be wholly diverted into the tunnels. The process was enjoined by the Superior Court. The matter was settled and that case did not reach the Supreme Court. The same question, however, came up in a later case between the city and other parties and the Supreme Court decided that, under the grant to the ancient pueblo of Los Angeles to which the present city had succeeded, the right of the city to the water of the river was paramount to that of the owners of the riparian land along its course, and that the owner of such land could not lawfully diminish the flow of the stream by means of excavations in the land adjacent thereto, although the water was not taken directly from the stream, but seeped through the loose formation of sand and gravel into the excavations. This rule has been followed ever since in all cases where persons having rights in a natural stream were threatened with injury by the extraction of the percolating water which sustained and supported the stream in its flow.

The rights to underground waters in the land of different owners situated over an ancient lake or basin also became a source of controversy because the pumping of large quantities of water

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19 Los Angeles v. Pomeroy (1899) 124 Cal. 621, 57 Pac. 585.
20 McClintock v. Hudson (1903-04) 141 Cal. 275, 74 Pac. 849; Verdugo v. Verdugo (1907-08) 152 Cal. 663, 95 Pac. 1021; Huffner v. Sawday (1908) 153 Cal. 93, 94 Pac. 424.
from one well lowered the water level in other wells in the same basin. The subject first came before the court in the year 1902. The question had been growing in importance for several years before that date. When the decision was first rendered in November, 1902, it attracted the attention of many other interested parties. A rehearing was granted for the purpose of allowing further discussion by others having larger interests at stake. Many additional briefs were filed and the final decision was not made until November, 1903. The previous opinion was adhered to and approved and a supplemental opinion was rendered giving additional reasons for the conclusion reached.\(^1\)

As the doctrine of the case is now regarded as settled, a statement of it may be of interest. The rights of the owners of different parcels of land situated over a water supply of that character, with respect to each other, and with respect to the use of the water on the overlying land, are mutual and reciprocal. They are regarded as persons having different interests in a common estate in such waters. Each is entitled only to a reasonable use of such water on such land and may take no more than his reasonable share for that purpose. None of them can rightfully take the water and export it from the basin for use on lands not situated over the common water-bearing stratum, if such taking injures the owners of other parcels of the overlying lands. In short, the lawful rights of the several owners of such lands to the waters therein are in almost all particulars similar to the mutual and reciprocal rights of the owners of riparian land along the course of an ordinary stream in the use of its waters. This conclusion was considered necessary to the full development and use of the natural resources of the state and to the prosperity and general welfare of its people. The geological formation of the land, its topographical characteristics, and the aridity of the climate produced conditions so different from those of the countries from which our common law rules were derived, that the well-known rule that the ownership of the soil in fee gave absolute title to all beneath the surface, including such subterranean water supplies,\(^2\) was held unsuitable to our conditions. In this the

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\(^1\) Katz v. Walkinshaw (1903-04) 141 Cal. 116, 70 Pac. 663, 74 Pac. 766, 99 Am. St. Rep. 35, 64 L. R. A. 236.

court followed the fundamental principles on which the common law is founded, rather than the rules for technical application to special subjects adopted for practical use in the different conditions prevailing in the countries from which we derive that law. It gave emphasis to the ancient maxim of the civil law, embodied in our Civil Code, and which is also a part of the common law, that "when the reason of a rule ceases, so should the rule itself." It is a good example of the elasticity of the common law, showing its adaptation to the varying conditions of human life in countries other than that of its origin.

This comprises in part the history of the water law in this state down to the present time. The demand for additional water and for the economical application of the water already in use continues without abatement and with constantly increasing urgency, because of the continuing influx of population and the large area of land capable of vastly increased production, when water is applied by artificial means. The next process in the development of the use of water, the storing of water in elevated reservoirs in the mountains, I have already mentioned. I do not believe that the law applicable to this process will present much difficulty. The legal aspect of these developments should present no very novel problems. The physical aspect presents alluring prospects of increasing prosperity and a fertile field for theoretical speculation, the discussion of which would be out of place here.

Lucien Shaw,
Chief Justice of the Supreme Court of California.

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