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LEGAL PLANNING FOR GROUND WATER PRODUCTION

Robert I. Reis*

I. INTRODUCTION

"Acute migranitis" may be the most apt term to describe the current rate of population influx into the Southern California area. It appears as if the American people have selected this section of California as the "region of promise fulfillment." Unknown to many of the thousands who find the climate of the state so attractive, however, is the existence of a most serious natural limitation: Southern California is an arid country. In simple terms, this means that there is a limited amount of water, local to the area, for the sustenance of population and industry. There are neither surging rivers, nor streams of plenty to meet the water needs of the people who are here and the ever-increasing demands of those yet to come. Where does the water, so essential for life and prosperity, come from? From the time the first settler discovered that by digging a hole in the ground beneath his land he could cause water to rise to the surface, through present times, the great majority of water used in Southern California has come from the ground.¹

The purpose of this article is to discuss several of the problems which an attorney faces in counseling a client who pumps his water from ground water basins. The lawyer must primarily be involved with two concerns:

- (1) how to assure his client adequate supplies of water, and
- (2) how to aid his client in securing this water at the least possible cost.

The role of counsel in planning for these two objectives will be treated from two vantage points. First, what "facts" are necessary to assure the client his "legal rights" to use ground water and how may these facts best be obtained, preserved, and offered into proof when the occasion arises?² Second, how may the "legal right" to use ground water act as a cost control factor in meeting the needs of a client who must use alternative sources of water supply?³ It is within these areas that counsel may avail himself of opportunities to maximize legal rights and minimize legal risks for his client.

II. BACKGROUND

One cannot begin to understand the nature of action required to protect the ground water rights of his client, nor how to make effective use of

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¹There are estimated to be, in Los Angeles County alone, twenty-six major ground water basins. TOLMAN, GROUND WATER 177 (1937).

²See *infra*, this article section III—PRESERVATION AND PROOF OF FACTS.

³See *infra*, this article section IV—WATER RIGHTS AS ECONOMIC LEVERS IN COST CONTROLS.

these rights, until he has a clear understanding of the factual situation within which he is working. This somewhat obvious statement has particular significance where it refers to matters which are foreign to the ordinary practice of the attorney. A short sketch of the nature of ground water basins, how they are used, the difficulties confronting the client who pumps water therefrom, and the legal rules which have been designed to allocate the right to pump water from the basins may be of assistance in clarifying much of the factual knowledge necessary for effective counseling in this area.

A. Physical Nature of Ground Water Basins

A ground water basin is not as one might imagine a lake or a reservoir. Rather, it is an area of land which will contain water because of the porous qualities of its soil composition. The soil beneath the surface is composed of rock, gravel, and other coarse materials which allow water to filter therein. The delineation of this expanse as a basin arises from the containing effect of natural barriers on the far sides of the area in the form of mountains, earth faults, and more dense land compositions which prevent the outflow of waters from the region. Thus, the illusion of a basin.⁴

Water enters the ground water basin in several ways. First, streams may connect beneath the surface with the porous layers of earth. By this means, water can flow directly into the *acQUIFYING* strata. Streams may also connect on the surface with the basin by passing over areas which have defined vertical, as well as horizontal, water-bearing stratum. Water filters down through these vertical areas and is transmitted to the horizontal layers at their point of contact. Finally, rain may be a source of supply. Rain waters may be absorbed in those areas of the basin where porous materials extend to the surface of the land. In much the same manner as described above, with reference to surface streams, the water percolates downward to the point of connection with the horizontal layers and is then transmitted throughout the basin structure.⁵ The quantity of water to be found in the ground water basin depends upon the number of streams and rivers which connect with the basin and the amount of rainfall which can be absorbed into the ground.

Historically, great amounts of water accumulated beneath the surface, where they remained stored, and ready for use. In the Southern California region, the first uses which were made of this stored water, were primarily for irrigation and other agricultural purposes. Large tracts could

⁴See generally, TOLMAN, *supra* note 1. See also, *Katz v. Walkinshaw*, 141 Cal. 116, at 138-140, 70 Pac. 663, at 664, 665 (1903); *Pasadena v. Alhambra*, 33 Cal. 2d 908, at 921, 922, 207 P.2d 17, at 25-27 (1949). A detailed survey of the Central and West Basins is contained in CALIFORNIA DEPARTMENT OF WATER RESOURCES, REPORT ON PROPOSED CENTRAL AND WEST BASIN WATER REPLENISHMENT DISTRICT (1959).

⁵See generally, TOLMAN, *supra* note 1. See also, CALIFORNIA DEPARTMENT OF WATER RESOURCES, *supra* note 4 at 41-45.

be irrigated economically by merely drilling a shallow well at that point on the land where the water was needed. Until the turn of the last century, the water would rise to the surface of its own force because of the pressure exerted upon it by other waters at higher land levels. This artesian phenomenon has all but disappeared in Southern California due to the fact that greater amounts of water withdrawals in all parts of the basins have lowered the ground water levels.⁶

As the ground water levels decrease, due to increasing withdrawals and diminishing rain and stream supplies, the water in a basin must be brought to the surface by means of pumps. Windmills, gasoline engines, and now electric motors, have been used to provide the necessary power to raise the water. Today, electric pumps are the most widely used devices and provide sufficient power to meet the pumping requirements of residential, agricultural, and industrial users.

It is within the context of the above that the problems of the client-ground-water-pumper arise. Obviously, at some point, the water in the basin will have decreased to such a low level that the client will no longer be able to raise amounts necessary to meet his needs.⁷ Before this point of prohibition is reached, the more immediate question of cost advantages in using the ground water supplies is put in issue. As the ground water levels decrease, the cost of raising the water to the surface steadily increases. When compared with the price of *imported* waters, ground water is much cheaper. But if the cost of ground water reaches a point at which it is more expensive (due to pumping costs) than imported waters, the client may be forced to use this alternative source of supply.

B. Legal regulation of ground water rights

In times of ground water shortage, or of conflicting physical uses, the courts have been called upon to act as arbitrator in allocating the right to use ground water. To better understand the nature and status of present day ground water rights, it is necessary to briefly consider the three major periods of development in the ground water law of California.

(1) The first rules designed to handle the situation of limited quantities of ground water adopted by California were derived from the English Common Law. The English case of *Acton v. Blundell*,⁸ was the effective formal authority from 1849 to 1902. The rule of that case was that the right to use ground water was a part and parcel of land ownership. Limitation on quantity of withdrawal was non-existent. The only controls

⁶See, generally, TOLMAN, *supra* note 1.

⁷Either he will not be able to raise sufficient quantities of water because his pumps are not powerful enough, or the quality of waters in his wells will have deteriorated due to mineralization or salt water intrusion. On this latter point see *infra* this paper section IV.

⁸12 Mees. & W. 324 (Exch., 1843).

placed upon the pumper were that he not withdraw excessive amounts of water motivated solely by an intention to injure.⁹

(2) By the beginning of the twentieth century, increased residential, agricultural, and industrial ground water usage, more powerful pumping facilities, and dense land use patterns precipitated intensified and new conflicts between ground water users. In 1903, the California Supreme Court decided *Katz v. Walkinshaw*.¹⁰ Justice Shaw's opinion established a whole new system of allocating rights of use in the ground water basins in California. The rule of *reasonable use* or *correlative rights* was substituted for the rule of absolute ownership. The system of allocation was based upon two major principles:

- (1) Water belonged first to those who used it upon the land (overlying owners); these users had co-equal rights to the supply and had to share equally in times of shortage or in instances where their uses were in conflict.
- (2) When overlying needs were satisfied, then, and only then, could water be used for industrial, urban and non-overlying uses by *appropriative takers*. These pumpers took water on the basis of proximities in time of use: first in time was first in right and the last in time had to yield when there were shortages or conflicting uses.¹¹

Surplus waters available for use by the appropriators were defined in the context of actual use and the ability to withdraw water from the basin. The court would enjoin pumping only if and when withdrawals directly interfered with pumping activities of other producers who were prior in right.¹²

(3) By the mid 1930's, it became apparent that steps had to be taken in order to control the total amount of water pumped from the ground water basins of Southern California. The hit and miss tactics of individually orientated adjudications of ground water rights were not effective in coping with the tremendous disparity between ground water supplies and demands. To remedy this situation, it was again necessary for the Supreme Court to revise the ground water laws of this state. The opportunity to do so presented itself in an action by the City of Pasadena against all of the major pumpers of ground water in the Raymond Basin Area.¹³ The Raymond Basin is located in the northwest portion of the San Gabriel Valley.¹⁴ The City alleged that ground water levels were dangerously declining, because more water was being withdrawn each year than was being replenished by rain and stream waters. Pasadena contended that the

⁹Hanson v. McCue, 42 Cal. 303 (1871). See also, HUTCHINS, THE CALIFORNIA LAW OF WATER RIGHTS 430-431 (1956).

¹⁰141 Cal. 116, 74 Pac. 766 (1903).

¹¹*Id.* at 135-137, 74 Pac. at 771, 772.

¹²In all cases which come before the court during this period, the harm claimed was that of actual interference with the right to take water from the basin.

¹³Pasadena v. Alhambra, 33 Cal. 2d 908, 207 P.2d 17 (1949).

¹⁴*Id.* at 921, 207 P.2d at 25.

total amount of ground water withdrawals had to be reduced to the *safe yield* (an amount equal to the average natural replenishment of the basin). Were this not accomplished, the city and other users of the ground water would suffer as the basin would be destroyed.¹⁵

The Supreme Court held that a good cause of action had been stated, and that in order to protect Pasadena's present right to the future use of the ground water in the basin, pumping would be enjoined where it exceeded the safe yield. The court noted, however, that it would be inequitable to place the burden of curtailing ground water production on any one pumper as would be required by the traditional last in time rule.¹⁶ The court found that each of the pumpers who were parties to the action were acting adversely to each other's interest in the preservation of the water supply in the basin. Thus:

All parties were restricted to a proportionate reduction in the quantities of water they had been pumping, the total annual pumpage from the basin being limited to the safe yield.¹⁷

Ergo, the advent of the doctrine of mutual prescription.

Two further basin-wide adjudications have occurred in Southern California since the decision in the *Pasadena* case.¹⁸ The reiteration of the doctrine set forth in *Pasadena*, the apparent acceptance of the equities embodied therein by a vast majority of ground water pumpers, and the continual decline of basin levels increases the certainty that it is solely within this framework that the right to take ground water will hereafter be determined.

The key to future adjudications lies in the requisite proof of facts. The right to use ground water is determined by subtracting from a) the total ground water use in the basin b) the safe yield. The difference represents the amount by which all pumping in the basin must be reduced. Each party's proportionate reduction is determined by reference to

¹⁵*Id.* at 922, 923, 207 P.2d at 26, 27.

¹⁶Adoption of appellant's position that the water must be allocated, at least as between the municipalities and public utility companies, strictly on the basis of priority in time of appropriation would not only ignore the fundamental principle that the statute of limitations runs against persons who fail to act when their rights are invaded, but it would result in an unequal sharing of the burden of curtailing the overdraft in that all pumping conducted under authority of certain of the later appropriations would be completely eliminated, whereas no restriction in amount would be imposed upon pumping based on earlier appropriations. Such a result does not appear to be justified where all of the parties have been producing water from the underground basin for many years, and none of them have acted to protect the supply or prevent invasion of their rights until this proceeding was instituted. Moreover, it seems probable that the solution adopted by the trial court will promote the best interests of the public, because a *pro tanto* reduction of the amount of water devoted to each present use would normally be less disruptive than total elimination of some of the uses.

Id., at 932, 933, 207 P.2d 32.

¹⁷HUTCHINS, *supra* note 9 at 446.

¹⁸*California Water Service Co. v. Sidebotham & Son, Inc.*, 224 Adv. Cal. App. 885, 37 Cal. Rptr. 1 (1964) (West Basin Adjudication); *Central and West Basin Replenishment Dist. v. Adams*, Superior Court, Los Angeles County, No. 786,656 (1961).

the actual amount of water he has been taking over the five year period immediately preceding the institution of the action. The future right to pump is therefore measured by actual withdrawals less the proportion this use bears to the total reduction required.

If withdrawal quantities cannot be proved with any degree of accuracy for the five year period immediately preceding the action, the risk of water right loss is great. The next section of this article deals with the expanding role of importance which the attorney can and should play in planning for the protection of his client's right to withdraw ground water.

III. PRESERVATION AND PROOF OF FACTS

Under the rule of *Pasadena v. Alhambra*, the most important single element of fact necessary to the attorney in his endeavor to establish his client's right to take water from an overdrawn ground water basin is proof of the amounts that the client has been taking for the prescriptive period. Since all, or substantially all, of the ground water basins in Southern California are presently being overdrawn, it is never too early for the prudent attorney to begin gathering proof of past withdrawals. He must of necessity be concerned with selecting an incisive method of proof, and if there is more than one apparent alternative, that type which would be most acceptable to the court.

The first apparent means of determining and preserving for evidence, statistics indicating the quantity of water which a client pumps might be labeled self help. This method involves the computation of gross amounts of water taken on the basis of one or more known factors. For example, the client could keep records of the number of hours during which his pump is in operation. Multiplied by the rate of the water flow through the size pipe used, the quantity of water for any given period can be established.¹⁹ A given standard of electric energy is required to lift water, and by metering an electric pump, the measure of water quantity may be obtained in a manner similar to that used in the first illustration.²⁰ The economy of this procedure is obvious; however, it is the least satisfactory from the vantage of risk involved. Despite the great number of variables subject to question, this method is still more acceptable than rough estimates or no measurement at all.

A second alternative which the attorney may suggest to his client is that an independent engineer be hired to measure the amount of water withdrawn each year from the basin. The report of the engineer will generally be acceptable evidence, and if necessary, the engineer's testimony may be offered into evidence. Unfortunately, the expense entailed in hiring an

¹⁹State Water Rights Board, Rules, Regulations and Information pertaining to RECORDATIONS OF WATER EXTRACTIONS AND DIVERSIONS, at 11-16 (1959).

²⁰*Id.* at 17-19.

engineer year after year, for an indefinite period, until there is an action brought to adjudicate the rights in the basin, makes this measure one of questionable value. If the client is not a large producer of water, the cost involved may be out of proportion to the benefit derived from an increased measure of certainty as to the acceptability of offered proof.

A third alternative, which does not appear to have been developed by attorneys to any significant degree, involves the filing and verification procedures of the 1955 Ground Water Recordation Act.²¹ The Act requires that pumpers of ground water who take in excess of twenty-five acre feet of water per year, file with the State Water Rights Board.²² After they have filed a declaration of the amount that they are withdrawing from the basin, a verification is made by the Board's engineers.²³ Because there is no filing requirement for pumpers who take less than twenty five acre feet per year, most attorneys have been led to view this statute as providing a mechanical step with which there is no need for them to be concerned. On the contrary, however, the statute provides the perfect composite of acceptable proof at a minimum cost to the client, and the attorney should recommend that it be used voluntarily by most ground water producer clients.²⁴ The statutory procedure is simple, direct, and certain:

- (1) a declaration of amounts must be filed with the Board;

²¹Recordation of Water Extractions and Diversions, CAL. WATER CODE §§ 4999-5008 (added by stats. 1955, ch. 1869, § 1, p. 3465).

²²CAL. WATER CODE § 5001 (1964):

Each person who, after 1955, extracts ground water in excess of 25 acre-feet in any year, shall file with the board on or before March 1st of the succeeding year a "Notice of Extraction and Diversion of Water" (hereinafter called "notice") in the form provided in Section 5002; provided, however, that no notice need be filed with respect to, and there shall not be required to be included in any such notice, (a) information concerning the extraction or diversion of water from a source from which less than 10 acre-feet has been taken during such year, or (b) information concerning a taking of diversion of surface water for the purpose of generating electrical energy and other nonconsumptive uses, and for incidental uses in connection therewith.

²³CAL. WATER CODE § 5007 (1964). See also Rules and Regulations State Water Rights Board (effective January 27, 1958) section 1012, *supra* note 19:

Requests for investigation and determinations under Section 5007 of the Water Code shall be accompanied by a payment of twenty-five dollars (\$25). As soon as practicable thereafter the board will estimate the total cost of the investigation and determination, including cost of the estimate, and will send a statement thereof to the applicant. Any part of such estimate in excess of twenty-five dollars (\$25) shall be immediately due and payable and shall be paid before the investigation is commenced. The estimated total cost of the investigation and determination shall not be exceeded by more than 20 percent without prior notice to the applicant and until his written consent to proceed is obtained. Upon completion of the investigation and determination a statement of the actual expense shall be sent to the applicant together with a refund if the actual expense of such investigation and determination is less than the amount previously paid. If the actual expense exceeds the amount previously paid the difference shall be immediately due and payable by the applicant.

²⁴It is apparent on a literal reading of the statute that voluntary requests and filing will be permissible. Further, this would seem to promote the purposes of the act. CAL. WATER CODE § 4999 (1964).

- (2) the Board's engineers will verify this amount and certify it for the pumper-client;
- (3) *this report is then admissible, under the statute, as prima facie evidence of the amounts of withdrawal.*²⁵

The cost of filing is a nominal five dollars per well in the first year, and three dollars per well in subsequent years.²⁶ The cost of the engineer's report is relatively insignificant to the client.²⁷ Either the original or a verified copy of these reports should be sent for by the attorney so that he may keep them on file where they will be accessible in the event of controversy.

IV. WATER RIGHTS AS ECONOMIC LEVERS IN COST CONTROLS

At the outset of this article it was stated that one of the attorney's primary concerns is aiding his client to secure water at the least possible cost. Several suggestions will be offered regarding ways in which the effectiveness of counsel in this area may be increased. The first consideration deals with the situation where declining water levels have increased the cost of water production to the point where it has become economically impractical for the client to continue to use water he has the right to pump from the basin.

It should be noted that water levels in a ground water basin do not decline at a constant rate. Areas furthest from the source (the forebay area) of basin water supplies will naturally have the lowest levels. If the client has been pumping water in this sector of the basin, he can be advised of the following possible alternatives:

- (1) to continue pumping at the same location and rate of cost;
- (2) to move his pumping to another location where there are higher water levels, and pipe the water to his place of use;
- (3) to purchase water from another source, i.e., a public agency which obtains water from the Metropolitan Water District of Southern California and lease or sell his right to take water from the basin to other producers (those at the higher water levels).

The first suggestion is obviously of no benefit to the client. The second can also be summarily dismissed because of the large capital outlay required. For the majority of small pumpers, these expenditures will be out of pro-

²⁵CAL. WATER CODE § 5007 (1964): "In any action or proceeding hereafter pending in which the facts, or any of them, contained in the notices so filed are material, such notices shall not be evidence of any fact stated therein, but such determination by the board shall be prima facie evidence of said facts." See also Towner, Address before the Irrigation Districts Association of California (December 12, 1957), Mutual Prescription—Threat to Vested Rights to Ground Water, at 10.

²⁶The cost of filing is set out in Rules and Regulations State Water Rights Board, Section 1010, *supra* note 19 (effective January 27, 1958). In 1965, the filing costs for the second year were raised. The first two notices are still three dollars each, but each notice thereafter is five dollars if in the same year.

²⁷*Supra* note 23.

portion to any feasible benefits. The third suggestion is, in reality, the only practical alternative open to the client. Purchases of imported water supplies²⁸ are generally more expensive than the average costs of pumping water. Where, however, the water level in the basin has declined greatly, the costs of pumping may approximate the price to be paid for imported water. By leasing²⁹ or selling his right to take water from the basin, the client can effectively use these ground water rights as an off-set against the cost of his purchases of imported water. The return may equal the normal costs of ground water pumping. A suggested basis upon which the client may charge for the use of his water rights is the difference between the cost of imported waters and the pumping costs of the person with whom he is negotiating.

Upstream producers may desire to purchase another's water rights despite the fact that imported water is available at the same price. Producers, such as public utilities, who supply large amounts of water to numerous residential users, need the basin for its storage capacity in order to meet the peak hours of residential uses. A pipe line connection will yield the necessary large quantities of water required during peak hours of demand and remain economically practical to operate during other hours of the day.³⁰

In the above situation, the concern was with the relative costs of ground water and imported water. In the following situation the emphasis remains on the use of ground water rights as off-sets in the purchase of imported water supplies. The client, however, is now faced with the problem of being unable to use his ground water rights because of the inferior quality of water in the basin at his point of use. The clearest example of this situation is contamination of the wells by sea water intrusion. The attorney can salvage advantages for his client by advising him to use his prior rights to take water from the basin as a means of cost control.

Many of the ground water basins in Southern California are bordered by the Pacific ocean. As long as water levels in the basin remain sufficiently high, the pressure created keeps the more dense sea water from intruding into the land area and polluting the wells and waters of the basin. Where levels of water in the upland areas decline because of excessive pumping in that region, the normal flow of water from the higher land toward the

²⁸The term imported water supplies, as used herein, refers to waters brought into the Southern California area by the Metropolitan Water District of Southern California and sold to Municipal Water Districts for distribution.

²⁹It is assumed that by leasing the rights of the client, the client's right to continue to use, or have the advantage of, the basin waters will be protected because the lessee uses the water in the right of the client. To ensure that the client is protected, some agreement should be included in the lease whereby the lessee's first withdrawals will be credited to the client's rights.

³⁰The pipe itself would be extremely costly to construct in the required size. Alternatively, it would appear that the public utility could construct surface storage, but again the cost of doing this is very high.

sea is reversed. The barrier once standing against the intrusion of sea water is diminished, and the saline waters cause the eventual destruction of the coastal areas of the basin.

It would appear that only two alternatives are available for the producer whose wells have been contaminated: 1) he can move his pumps inland, with its corresponding costs; or 2) he can purchase imported water. The latter alternative seems to be the only realistic alternative. By leasing or selling his right to take water from the basin, a valuable use may be made of what appears to be a right of little or no significance.

A client will incur serious risks of losing his water rights if he ceases to pump for any period of time. It is obvious that the client will not want saline water and will cease to pump.³¹ However, where the client uses imported water, he need not lose his right to take water from the basin. He can file for, and receive an *in lieu of credit* under section 1005.1 of the Water Code which will permit him to preserve his water rights.³² In the interim period, between the leasing or sale of his water rights, the client should be advised to file under section 1005.1 to insure that he retains his right to use the basin waters.

V. CONCLUSION

The solutions offered in this article have of necessity dealt with a body of highly complex factual situations and legal concepts. The proffered suggestions, therefore, must be taken with the end in view of being more by way of illustration, than as definitive directives in the solutions of client difficulties. They are only examples of the way in which the attorney may take part in the planning processes.

It is apparent that there is a great deal which the attorney can and should do to insure and protect his client's interest in the ground water basin. A healthy production plan makes the maximum use of all available facilities to master the client's ultimate objectives of securing an adequate supply of water at the lowest possible cost. It is readily seen that the concept of preventive law which pervades this issue has a rightful place in the operational devices of water production and water law.

³¹Even if the client did continue to pump with the intention of protecting his basin rights, he could not qualify under the reasonable and beneficial use test of the 1928 Amendment to the California State Constitution. CAL. CONST., art XIV, § 3.

³²CAL. WATER CODE § 1005.1. The purpose of this statute was to protect those that used an alternative supply of water either because they could no longer take from the basin or because they were aiding in curtailing withdrawals therefrom. The credit is only given when no-use is made of the right to the basin waters. Thus, when your client sells or leases his right to use the basin waters, he is no longer entitled to a credit.