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Article

***269 WE DON'T DO GROUNDWATER: A MORSEL OF CALIFORNIA LEGAL HISTORY**

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***270** “There will always be great difficulty in fixing a line, beyond which the water in the sands and gravels over which a stream flows, and which supply or uphold the stream, ceases to be a part thereof and becomes what is called ‘percolating water.’” [\[FN1\]](#)

I. INTRODUCTION

It must seem surprising to people elsewhere that California, unlike other western states, continues to treat surface water and groundwater under separate and distinct legal regimes, even though everyone today acknowledges that water comprises a continuum through which the water moves wherever gravity takes it. [\[FN2\]](#) Moreover, whatever “mystery” there once was about the movement of water underground, and that induced lawmakers and treatise writers to eschew efforts to regulate groundwater, is no longer a hindrance to modern management, as most

states have acknowledged. What, then, explains California's failure to bring its water law into line with contemporary knowledge, and with scientific reality? The answer (actually there are two answers) is not very mysterious.

First, while California extensively regulates surface water by an administrative permit system, groundwater is effectively unregulated. People who have access to groundwater can just pump it. They need no one's permission, and no one regulates their use. Water users like it this way; groundwater is a sort of ace-in-the-hole. When surface water supplies are restricted, they can pump groundwater as a substitute, and so it functions as one form of insulation against both drought and increasing regulation. One may wonder why surface water users tolerate this situation, since a good deal of groundwater *271 pumping draws on waters tributary to surface supplies, and diminishes them. It is a good question, and there is no obvious answer to it. Of course, a great many surface water users are also groundwater pumpers, so they may receive both benefits and detriments from the existing situation. Probably the most plausible answer is that water users of all stripes dislike the existing regulatory system, and feel the less regulation, the better.

Second, California does have a fairly well developed response system when a basin finds itself in crisis, which undoubtedly relieves the pressure to reform the system globally. A number of Southern California basins have been the subjects of litigation leading to the development of more-or-less comprehensive management schemes. [FN3] Usually overpumping leading to water table decline, saltwater intrusion, and shortages has stimulated such adjudications or settlements. While the arrangements vary widely, often a management entity is created that can limit pumping, and/or impose charges for excess pumping, purchase substitute water, recharge depleted aquifers, initiate conjunctive use arrangements, and so on. Such arrangements have staved off the sort of crisis that has led elsewhere to systemwide reform of traditional groundwater legal regimes. California has also tried to empower local agencies to implement modern groundwater management on a local or regional basis, but the laws with which it has done this (though of some use) are too limited to solve the problem. [FN4]

While California has a system in place that averts crisis and system collapse, it continues to suffer a variety of dysfunctional results growing out of a system that is at odds with hydrologic reality. One example that has drawn a good deal of attention recently arises from assertions that groundwater pumpers are depriving streams of water needed to meet downstream environmental flow requirements, even though regulated surface water users are meeting the bypass flow requirements that have been imposed on them. Such newer concerns about groundwater pumping, at the behest of interests outside the traditional water-using constituencies, has generated new controversy over what had been an almost-forgotten byway of California water law, the so-called "subterranean stream" exception.

In a legal regime like California's, where groundwater and surface water are treated differently, the question obviously arose as to whether any water that was not visible on the surface should be considered, legally speaking, to be groundwater. The answer lawyers always gave was "no." First, they said, some water that moves directly underneath a river in its bed, though beneath the surface, is really just a component of the river. It would be inappropriate to allow someone to sink a well in the riverbed and take such water (as groundwater) to the obvious detriment of downstream surface users. Moreover, they *272 reasoned, groundwater is only treated separately because we do not understand its "mysterious" movements. But if a river, whose movements are known and knowable, is flowing under the surface, either as the underflow just described, or through a limestone cavern as a true stream, it should be treated like any other river on the surface. Thus, the experts concluded, a river, or component thereof, though found beneath the surface, should be treated like any other stream.

The result of this traditional reasoning was to create three different categories of water: (1) surface streams, which were subject to permitting and regulation; (2) groundwater - usually called "percolating groundwater" - which was unregulated; and (3) "subterranean streams," which were treated the same as surface streams.

As controversy arose in recent years over the asserted adverse impact of unregulated groundwater pumping, it

was urged that the “subterranean stream” category be re-examined and interpreted more broadly so as to enlarge the scope of permitting and regulation over pumping that was affecting instream values. To put the matter simply, on one side it was urged that subterranean stream water be limited to what is usually called underflow or subflow, that is, the water in the immediate environs of a surface stream and flowing along with it, though beneath the surface. [\[FN5\]](#) The other side urged that it be expanded to encompass much if not all the groundwater physically tributary to a surface stream (under the theory that everything within the relatively impermeable surroundings of a surface stream be considered its bed and banks, and thus part of the stream).

I should emphasize at the outset that the terms and categories, such as “underflow,” are utilized in statutes and judicial opinions. [\[FN6\]](#) As a legal term, underflow has been defined in various ways. It is said to ***273** be water “in the soil, sand, and gravel composing the bed of the [stream]” [\[FN7\]](#) which “support[s] the surface stream in its natural state” [\[FN8\]](#) or “feed[s] it directly.” [\[FN9\]](#) The 1899 decision in *City of Los Angeles v. Pomeroy* is cited for the view that underflow requires the surface and subsurface be in contact and that the subsurface flow shall have a definite direction corresponding to the surface flow. [\[FN10\]](#) An additional, commonly cited definition of underflow is taken from Wells A. Hutchins:

The underflow or subflow of a surface stream consists of water in the soil, sand, and gravel immediately below the bed of the open stream, which supports the surface stream in its natural state or feeds it directly.

To constitute underflow, it is essential that the surface and subsurface flows be in contact and that the subsurface flow shall have a definite direction corresponding to the surface flow.

. . . .

The underflow may include the water moving not only in the loose, porous material that underlies the bed of the surface stream, but also the lateral extensions of the water-bearing material on each side of the surface channel. But it must be moving in a course and confined within a space reasonably well defined, so that the existence and general direction of the body of water moving underground may be determined with reasonable accuracy. [\[FN11\]](#)

“Underflow,” “subterranean streams,” and “percolating groundwater,” bear little, if any, relationship to geological realities. Indeed, these water law terms are geographic conceptions fundamentally at odds with science's understanding of water's movement. The legal categories seem to assume, for example, that there is a fixed space within which water is the underflow of a stream, and beyond that space the water is something else. From a hydrogeological perspective, such geographic categories are inapt, and efforts to fit water into the law's categories by using these technical-sounding classifications give the enterprise a somewhat daffy air. Is the water moving parallel to the stream, or perpendicular to it? Is the aquifer more like a lake in shape, or more like a river? Is water percolating through the ground rapidly enough to be treated as “flowing” water? Nonetheless, the presence of laws using such terms and concepts require them to be taken seriously, and given some meaning.

***274** The interpretive format for dealing with this puzzle in California is a provision of section 1200 of the Water Code, which identifies the scope of jurisdiction of the State Water Resources Control Board (“Board”), the state's water permitting and regulatory agency. [\[FN12\]](#) That section states, “[w]henver the terms stream, lake or other body of water, or water occurs in relation to applications to appropriate water or permits or licenses issued pursuant to such applications, such term refers only to surface water, and to subterranean streams flowing through known and definite channels.” [\[FN13\]](#) In an effort to resolve the dispute over how to interpret section 1200, the Board requested a review and report on the legislative history of the provision and the administrative and judicial precedents under it. [\[FN14\]](#) The pages that follow are a shortened version of that report. Because the history of California's efforts to deal with the subterranean stream question turned out to tell a more richly complex story than anyone expected, it is edited and offered here, with the thought that it may be of interest to anyone wanting to understand the evolution of western water law.

The report on which this article is based was done under a single, straightforward assumption. That assumption was that the statutory provision in question, section 1200, was enacted to achieve some legislative purpose, and that however unscientific or outdated the statutory language may be, it is nonetheless likely the legislators had some real

problem in mind. As will become clear in the pages that follow, those who drafted the 1913 legislation [FN15] that became today's Water Code section 1200 were not ignorant of the interactive relationship between groundwater and surface water. They knew perfectly well that much percolating groundwater was on its way to or from a surface stream, and they knew that water appeared, disappeared, and reappeared on the surface as streams flowed. The questions addressed here are these: what were the drafters of that provision of the law trying to accomplish, and what would be required to implement their intent today?

*275 II. THE JUDICIAL BACKGROUND OF THE WATER COMMISSION ACT

A. The Pomeroy Case

It has always been an article of faith among California lawyers that one has to look to the 1899 decision in *City of Los Angeles v. Pomeroy* [FN16] for legal guidance in deciding whether certain subsurface waters are, or are not, a subterranean stream under California law. [FN17] Before turning to that much-cited case, a few preliminary comments are in order. First, the Pomeroy decision is not legally binding precedent. The court decided it prior to the enactment of the governing statute [FN18] and its predecessor provision, and, therefore, it does not represent the Supreme Court's interpretation of the legislature's intent in enacting the Water Commission Act in 1913. Second, Pomeroy has been more often plucked for its quotable language than studied for its meaning and context (many commentators quote the language of its headnotes rather than the text of the opinion), and at least some of what has been attributed to it over the years is misleading. Third, any effort to ascertain the significance of Pomeroy to the 1913 law needs to take account of subsurface water law developments in the California Supreme Court between 1899 and 1913. Fourth, and finally, it is important to understand what the legislature was trying to do when it enacted the statutory provision in question, rather than just assuming it meant to codify the Pomeroy opinion. The following section considers each of these matters, because the Pomeroy case itself had an interesting history.

Pomeroy was an eminent domain valuation case. [FN19] In order to improve its municipal water supply system, Los Angeles had condemned a narrow strip of land comprising 315 acres, averaging some quarter-mile in width, adjacent to the Los Angeles River just *276 above where it passes through the narrows out of the San Fernando Valley, between the eastern extremity of the Cahuenga Mountains and the Verdugo hills. [FN20] The question in the case was how to value the land taken. It was determined that Los Angeles had a paramount pueblo right to the water of the Los Angeles River. [FN21] If the water beneath the condemned land was water of the Los Angeles River, the city was entitled to it and the condemnation award could not include the sales value of the water under the land for use elsewhere. [FN22] Notably, the case had nothing to do with state regulatory jurisdiction over groundwater. The question was simply whether the water beneath the defendants' land was part of the Los Angeles River (Los Angeles wins), or whether it was part and parcel of the condemned land (defendants win). [FN23]

The physical situation in the case was that the water of the Los Angeles River had its source in the mountains surrounding the San Fernando Valley; water that went underground into the alluvium of the valley, and then by gravity flow, found its way to the river. [FN24] The court acknowledged that all, or virtually all, the groundwater from the San Fernando Valley watershed found its way into the Los Angeles River. [FN25] The defendants' land lay on both sides of the river, and the subsurface water beneath it was "in intimate contact" with the surface flow, and flowing in the same direction at a rate about 1/1000 the rate of the surface stream. [FN26] The court held the evidence sustained a finding this subsurface flow was a subterranean stream. [FN27] The bulk of the court's opinion examines the question whether the law, with respect to subterranean streams, was correctly stated in the trial judge's instructions to the jury.

Because the narrow question in the case was whether the subsurface water in question was part of the Los Angeles River, the instructions dealt with evidence of whether the water underground was an immediate subsurface element of the river, what is usually called underflow. [FN28] For example, the trial judge told the jury that if it found *277 the water moving underground was "in the same general direction as the surface stream, and in connection with it," [FN29] then the water should be considered as part of the watercourse. That instruction, and its

approval by the supreme court, does not decide one way or another whether the presence of subsurface water flowing in the same direction as the surface stream is a necessary element of any subterranean stream, only that it is a sufficient element. [FN30] There is, however, at least one thing the court does make clear: nothing in the case was intended as a determination that all tributary underground water should be classified as a subterranean part of the river to which it is tributary. [FN31]

Taken all in all, Pomeroy can be read broadly or narrowly, and neither reading can be said definitively to be right or wrong. The case itself deals only with the underflow of a gaining stream, [FN32] but purports *278 to set out more generally “the proper definition of a subterranean stream,” which it does by quoting from Clesson Kinney's treatise on the law of irrigation. [FN33] In so doing, it employs terms that are capable of differing interpretations, but which the court either does not define, or defines ambiguously. For example, the court does not indicate what sort of movement is required for subsurface water to be “flowing,” a matter of some importance since virtually all groundwater is in motion to some extent. It says a channel must be “defined,” and defined means “contracted and bounded,” [FN34] but it does not further define those terms. Whatever contracted and bounded means, the court acknowledged in the Pomeroy case the contracted and bounded area was as much as two and one half miles in width, [FN35] which is hardly what most people would think of as a contracted channel. Moreover, one is left unsure whether it is essential to the decision that within such a channel “there was a subsurface flow corresponding [that is, parallel] with the surface flow” [FN36] If so, that would significantly narrow the potential for a broad area of an alluvial valley to qualify as a contracted and bounded channel. As to the “sides and bed” to the channel, [FN37] the court describes them as “comparatively impervious,” [FN38] giving no further definition to that characterization.

The plain fact is that while the outcome in Pomeroy, in favor of Los Angeles, made good sense, the decision's legal effort to define a part of the groundwater continuum as a “subterranean stream” was both a hydrogeological and public policy fiasco. Virtually everyone acknowledges this. What is less often noted is that the California Supreme Court soon abandoned the Pomeroy test. In fact, it is almost certainly the case that the Pomeroy court itself realized the subterranean stream category it had fashioned was an unfit tool for water management (though it continues to be cited and relied on uncritically by the Board today). [FN39] After all, the judges in the Pomeroy *279 case were perfectly well aware the water in the Los Angeles River, its underflow, and the rest of the surface and subsurface water in the San Fernando Valley, was part of a single, continuous system. The Pomeroy Court acknowledged that fact explicitly. [FN40] It knew full well the percolating water outside of the acreage in the case was on its way to those lands where it would be magically transformed into subterranean stream water. Why, then, did it write the opinion it did? After all, unlike today's administrative agencies and courts, it had no subterranean stream language in a statute it was obliged to interpret and implement. The court was making law in the common law tradition.

B. The Pomeroy Case in its Historical Context

The traditional common law definition of subterranean streams was very narrow and essentially limited to flows in limestone regions. [FN41] Why didn't the court in Pomeroy leave it at that, and instead adopt a common sense test based on whether the water in question was tributary to the surface river, and whether its pumping would adversely affect the rights Los Angeles held in the river? That would have been a straightforward, hydrologically and legally rational approach, and would have avoided the need to wrestle with the unwieldy concept of a subterranean stream.

We now know the answer. It was provided a few years later by the trial judge in Pomeroy, Lucien Shaw. Shaw subsequently became a Justice of the California Supreme Court, and wrote several important groundwater opinions, including the decision in *Katz v. Walkinshaw*. [FN42] The explanation is ironic in the extreme, because the justification for what the court did in Pomeroy, and for the rule it fashioned - which still dominates California groundwater law a century later - was repudiated by the California Supreme Court in 1903. [FN43] Why did the court do what it did, and what happened next? The answer is fascinating.

In 1899, when Pomeroy was decided, it was still widely believed that the common law doctrine of absolute ownership was the law governing groundwater in California. [FN44] Under that doctrine, a landowner could pump and bear no responsibility for the impact on other pumpers, however great the damage to them, so long as he was not actuated by malice. [FN45] Indeed, the trial judge, in his instructions in Pomeroy, drew on *280 the decision in *Hanson v. McCue*, [FN46] a California case that cited absolute ownership as the governing rule for groundwater. [FN47] If absolute ownership was the law governing groundwater, Los Angeles would only be secure in its rights in the Los Angeles River if the water in question was a “subterranean stream,” and thus not subject to the law governing groundwater. The assumption that absolute ownership was the law governing groundwater created the need, in Pomeroy, for a subterranean stream doctrine. [FN48] The irony of Pomeroy is that absolute ownership was not the law in California after all, though the court was not to so rule until several years after deciding Pomeroy. [FN49]

Though the Pomeroy court understood the hydrological realities in the case before it, it accepted the premise that underlay Judge Shaw's instructions: percolating groundwater was subject to the absolute ownership rule. [FN50] On that premise, either Los Angeles had to lose a case that the court undoubtedly believed the city deserved to win, or the court had to look to a legal theory that solved the immediate problem before it, but created a hydrologically untenable distinction among groundwater at different stages of its voyage through the San Fernando Valley. The Pomeroy court chose to decide in favor of a result that protected Los Angeles' treasury at the expense of a coherent legal theory. Since Pomeroy did not actually involve a dispute over the use of the water itself, it left to another day the question how much protection Los Angeles would be given against pumpers generally in the San Fernando Valley, that is, how much tributary groundwater would be found to be “subterranean stream” water.

281 C. Doing the job Pomeroy Failed to do: *Katz v. Walkinshaw* and *Los Angeles v. Hunter

Only four years after the Pomeroy decision, the California Supreme Court decided a far more famous case, *Katz v. Walkinshaw*. [FN51] The facts were simple enough. The plaintiff was pumping groundwater and using it on his overlying land, and the defendant was pumping groundwater from under his nearby land, and taking it off the overlying land for use. [FN52] The plaintiff claimed that the defendant's pumping dried up his wells, and that he was entitled to relief. [FN53] The defendant asserted that California followed the absolute ownership doctrine of groundwater law whereby “each landowner owns absolutely the percolating waters in his land, with the right to extract, sell, and dispose of them as he chooses, regardless of the results to his neighbor.” [FN54] The plaintiff denied absolute ownership was the law in California, but had a second theory. He claimed they were both pumping from an underground stream, and as a result, the law governing percolating groundwater, even if it was absolute ownership, did not apply. [FN55]

What makes the case especially significant here is the court found that it need not decide whether the water in question was a subterranean stream or percolating groundwater, because absolute ownership was not the law of percolating groundwater in California. [FN56] Thus, the defendant would lose whether the water in question was percolating water or the water of a subterranean stream. [FN57] Today *Katz* is universally known as the case that declared correlative rights to be the doctrine governing competing groundwater pumpers in California. [FN58] What is not so well remembered is the decision broke sharply with tradition and precedent, and rejected claims that absolute ownership must be the law of percolating groundwater because that was the common law rule, because California had adopted the common law, and because *Hanson v. McCue*, a previous California Supreme Court decision, had stated in dictum that it was the law. [FN59] The rejection of the common law absolute ownership rule in *Katz* was at the time considered “novel, and of the utmost importance” and the case *282 was decided by the court upon rehearing, following exhaustive briefing. [FN60]

The relevance of the groundbreaking decision in *Katz* is that it made the doctrinal gymnastics of the Pomeroy case unnecessary, and reduced the subterranean stream category to virtual irrelevance. If landowners pumping groundwater—even percolating groundwater—must respect the rights of other water-rights holders whom their pumping injures, then it makes no difference in a case like Pomeroy whether the water in question was a

subterranean stream or percolating water. Since Los Angeles had a paramount pueblo right to the waters of the Los Angeles River, any diversion of groundwater that impaired that right would violate Los Angeles' right under the rule of Katz. [\[FN61\]](#)

Katz essentially determined the resolution of conflict between contending water users should be based on the impact of one use upon another, rather than upon some ex-ante classification of the source. This change was calculated to bring the legal rules into congruence with hydrological realities; and in doing so, to replace the legal fiction that groundwater movement was unknowable with case-specific factual inquiries. Was the water's movement known or practically determinable? If so, what were the impacts? And if there were impacts, were they legally redressable?

Had the Katz decision preceded Pomeroy, the subterranean stream concept in California law might well have faded into the mists of legal history. As the court stated in Katz, “averment[s] that . . . water constitute[s] part of an underground stream may be regarded as surplusage.” [\[FN62\]](#) That statement is especially notable because the author of the Katz opinion was none other than Lucien Shaw, the trial court judge in Pomeroy. [\[FN63\]](#) It was Judge Shaw's instructions that were the subject of the decision in Pomeroy, and it was Shaw who relied on the absolute ownership doctrine from *Hanson v. McCue* in his instructions. [\[FN64\]](#) His reliance on the absolute ownership doctrine may have been the very thing that led the Pomeroy court to rely on the subterranean stream finding, and to equivocate about the status of all the rest of the percolating, tributary groundwater in the San Fernando Valley. Yet four years later it was the same Lucien Shaw, now a justice (and later chief justice) of the California Supreme Court, who wrote the Katz opinion stating the “subterranean stream” category was effectively “surplusage.” [\[FN65\]](#) Indeed, in a law review article he wrote many years later, Shaw restated the holding of Pomeroy in terms that brought *283 it into line with Katz and subsequent decisions. [\[FN66\]](#) That case, he said, stood for the proposition that “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.” [\[FN67\]](#)

Why, then, did Shaw give the instruction he did in Pomeroy, which made the distinction between a subterranean stream and percolating ground water so important? Shaw gave the explanation in his opinion in Katz. Speaking of himself, he said:

Inasmuch as the writer of this opinion [in Katz] was also the writer of the instruction under consideration [in Pomeroy], it may be proper to say that he did not give the instruction because he approved that part of it restating the doctrine of *Hanson v. McCue*. The instruction was given because . . . [it] had been requested by the appellants in the case, and . . . [Los Angeles] consented that that part should be given in substance, rather than take the chances of a reversal of the case should the Supreme Court hold its refusal to be erroneous [that is, should the supreme court approve the absolute ownership doctrine]. [\[FN68\]](#)

In short, Los Angeles was worried that absolute ownership might be held to be the law of percolating groundwater in California, and if it were, then Los Angeles could only prevail if the water under the land being condemned was not percolating groundwater, but was part of a subterranean stream. [\[FN69\]](#) Thus, to be on the safe side, it agreed to the instruction, and the Pomeroy court, unwilling or unready to repudiate the absolute ownership doctrine, assumed its validity, and was thus obliged to draw the subterranean stream/percolating groundwater distinction. [\[FN70\]](#)

It was not until Shaw's opinion in Katz that the court decisively repudiated absolute ownership. [\[FN71\]](#) Any doubt the subterranean stream issue was no longer considered significant to groundwater litigation in California was removed in subsequent supreme court decisions. In a case decided less than a month after Katz, Justice Shaw wrote:

The case of *Katz v. Walkinshaw* . . . establishes a rule with respect to waters percolating in the soil, which makes it to a large extent immaterial whether the waters in this land were or were not a part of an underground stream, provided the fact be established that their extraction from the ground diminished to that extent, or to some substantial extent, the waters flowing in the stream. [\[FN72\]](#)*284 Then in 1909, in another

groundwater case, the court stated “[t]here is no rational ground for any distinction between such percolating waters and the waters in the gravels immediately beneath and directly supporting the surface flow, and no reason for applying a different rule to the two classes . . . if, indeed, the two classes can be distinguished at all.” [FN73]

That same year the court decided *City of Los Angeles v. Hunter*. [FN74] *Hunter* dealt with the question raised but left in limbo in *Pomeroy*: What right did landowners in the San Fernando Valley further from the stream than those in *Pomeroy* (though still within the several-miles-wide banks area identified in *Pomeroy*) have to pump tributary groundwater that diminished flows in the Los Angeles River? [FN75] In order to quiet title to its paramount right to use of the waters of the river, Los Angeles brought suit against owners of some 5,000 acres in the San Fernando Valley, of which the owners were pumping water asserted to be tributary to the Los Angeles River. [FN76] The defendants' principal claim was “that the waters are strictly percolating waters, not belonging to the subterranean flow of the stream, but if concededly on the way to join and swell such flow, still percolating waters, to the use of which, as owners of the land, they have an absolute indefeasible right.” [FN77]

The court rejected this claim, holding it was immaterial whether the waters in question were considered percolating or not. [FN78] Since “[t]hese waters percolate . . . in the sense that they form a vast mass of water confined in a basin filled with detritus, always slowly moving downward to the outlet [which is the Los Angeles River, then insofar as] Los Angeles has paramount right to the use of all the waters of the river . . . none of these so-called percolating waters may be withdrawn to the invasion and injury of such right.” [FN79] It was held unnecessary, as in *Katz and McClintock*, to classify the water either as percolating or as a subterranean stream. [FN80]

When Kinney, on whose 1894 treatise the *Pomeroy* court had relied, [FN81] published his second edition in 1912 he acknowledged the *285 change. Citing the more recent California cases, such as *Hunter*, he explained that only a limited class of percolating waters, diffused percolating waters, “are considered as a part of the very soil itself and belong to the realty in which they are found.” [FN82] Picking up the test of *Hunter*, he explained that “these [percolating] waters are those which, as far as known, do not contribute or are not tributary to the flow of any definite stream or body of surface or subterranean waters.” [FN83] Though unwilling to let loose of the old terminology, Kinney acknowledged the groundwater question was becoming a matter of evidence based on the ability to determine hydrological relationships, rather than a formal classification based on the geography of the water's movement:

It is plain to see that, as the years go by, the class of diffused percolating waters will be growing smaller and smaller. This is due to the scientific investigations of the movements of percolating waters through the ground, and also to the discoveries which are constantly being made that certain waters which were once considered mere percolations flowed in defined subterranean channels which have become known In time, if the courts are as active in establishing new rules governing subterranean waters within the next few years as they have been in the past ten years, which rules have but kept pace with the scientific investigations upon the subject, this class of subterranean waters will pass from the class of those flowing in unknown courses to those flowing in known courses, and the ‘secret incomprehensible influences,’ and ‘practical uncertainties’ will become comprehensible influences and practical certainties. [FN84]

The newer California judicial approach that Kinney acknowledged, which focused on whether groundwater was known to be contributing to a surface stream, as the line of demarcation, continued into modern times. In 1943, in *Los Angeles v. Glendale*, the supreme court stated unequivocally that Los Angeles' pueblo right in the Los Angeles River extended to all the groundwater in the San Fernando Valley upon which the flow of the river depended. [FN85] The court also made clear, by citing *Hunter* as authority, it did not view that case as limited to groundwater in the southeast corner of the valley within the bed and banks area described by *Pomeroy*:

It has long been established that as successor to the pueblo of Los Angeles, the city of Los Angeles has a right, superior to that of a riparian or an appropriator, to satisfy its needs from the waters of the Los Angeles River. Because the flow of the river is dependent on the supply of water in the San Fernando Valley, it has

also been held that the pueblo right includes a prior right to all of the waters in the basin. [FN86]*286 In 1975, in *Los Angeles v. San Fernando*, the supreme court reaffirmed Glendale explicitly. [FN87] But it did something else as well. It made clear that the scope of Los Angeles' pueblo right grew out of the scope of the waters of the Los Angeles River, and that the scope of the Los Angeles River was determined by the extent of the groundwater that was tributary to the river. [FN88] In other words, for determining pueblo rights, the Los Angeles River consists of its surface flow and the groundwater tributary to it. The court decided the subterranean extent of the Los Angeles River is measured by the tributary nature of the groundwater in the San Fernando Valley, the very thing that Pomeroy said it was not deciding. [FN89] Revealingly, both the Glendale and San Fernando cases cite Hunter, not Pomeroy, as authority for the expansive view of the subterranean extent of the Los Angeles River. [FN90] In this respect, it is important to note Glendale and San Fernando do not simply say pueblo rights extend to groundwater beneath the pueblo boundaries. [FN91] The court conceived of the pueblo right as including, within the surface stream, its tributary groundwater--the "waters of the Los Angeles River and the waters supplying it." [FN92] The cases are about "rights in the Los Angeles River," [FN93] "the river to which the pueblo right attaches." [FN94] That, of course, is a fundamentally different view both from the 1894 Kinney classification of waters, [FN95] and from the boundary the court in Pomeroy was at pains to identify when it said its decision was not meant to embrace the entire San Fernando Valley. [FN96]

But - and this is a most important "but" - the legislation upon which section 1200 of the Water Code rests did not follow the path that Justice Shaw and the California Supreme Court's subsequent pueblo rights cases set out. Instead, by a circuitous path, the legislature was led back to the distinction and formulation the Pomeroy court had used. How that happened is the subject of the pages that follow.

III. THE STATUTORY RESPONSE

A. The Water Commission Act of 1913

Prior to 1911, all appropriation rights to surface water were acquired under sections 1410 to 1422 of the Civil Code, which *287 essentially required filing a notice of appropriation. [FN97] Failure to comply made appropriators vulnerable to subsequent claimants who complied with the statutes. [FN98] The state did not administrate water rights. [FN99] Groundwater was simply pumped by overlying landowners without any state administration or regulation. [FN100] In 1911, the legislature established a State Conservation Commission to study the need for new laws to control the use of the natural resources of the State (one of which was water), report to the governor, and recommend measures to the legislature. [FN101] George C. Pardee, a progressive Republican, who had been California's Governor from 1903-07, was appointed chairman of the Commission. The other two members were Francis Cuttle and J.P. Baumgartner. The report of the Commission was transmitted on January 1, 1913, [FN102] and its legislative proposal for water was the source for the bill that ultimately became the Water Commission Act. [FN103] Section 42 of that Act is, with very slight changes, today's [California Water Code Section 1200](#). [FN104] The inspiration for the enactment of a comprehensive water law was Elwood Mead's influential 1901 Report of Irrigation Investigations in California. [FN105]

The original legislative draft prepared by the Conservation Commission explicitly provided a permit system both for surface and underground waters, and the two categories were dealt with in separate, similar sections of the draft bill. [FN106] Just as the bill recognized riparian uses of surface water, and did not subject them to permitting, *288 it recognized the right of overlying landowners to use underground water on overlying land without permitting. [FN107] But it did require those seeking either surface stream appropriations, or groundwater appropriations for use off the overlying land, to obtain appropriation permits. [FN108] In addition, the bill specifically granted the Commission authority to protect those with surface stream rights against off-tract underground pumpers "where it is claimed that such development and carrying away of water is diminishing the supply of water of such riparian owner or appropriator of water from the streams of water or underground water of the State of California." [FN109]

In short, the Commission bill sought to eliminate substantively different groundwater and surface water legal

regimes, and to institute integrated, parallel systems. But because the bill still recognized underground water and surface water as distinct categories, the Commission had not really rid itself of the need to answer the question: what is groundwater, and what is surface water? [FN110] Section 8 of the bill defined “[u]nderground water, for the purpose of this act . . . as any water that occurs or is found beneath the surface of the ground,” and generated a lengthy discussion in hearings held by the Commission. [FN111] The predictable question was: if a surface stream moves underground for a certain distance, and then again rises to the surface, may one put a pump in the below-surface area and then be subject to the underground water provisions of the act, rather than the surface water provisions? [FN112] The Commission debated the question whether there was water that “occurs or is found beneath the surface of the ground” that should not be treated as underground water, but as surface water? [FN113]

***289** The following excerpts from a hearing held on the Commission's original bill on May 28, 1912, are exceptionally revealing of how those involved in the development of the 1913 legislation were thinking about the issue at the time. The chair of the Commission, former Governor George Pardee, was going through the Commission's draft bill section by section:

MR. PARDEE: Section 8: Underground water, for the purpose of this Act, is defined as any water that occurs or is found beneath the surface of the ground

....

MR. KEECH: . . . The sub-surface stream is deemed to be part of the stream; one minute it is in the open and another minute it is below the surface. The vested rights in a stream under the riparian law is [sic] the stream consisting of the running open water on the surface and also of the sub-surface water in the same bed.

....

MR. BAUMGARTNER: As we have handled “Stream flow” in the Bill, does it interfere with the sub-surface stream?

MR. KEECH: You have handled “stream” so far under the term of riparian rights only, and the riparian rights include that sub-surface flow and is [sic] sustained by the courts, and sustained by constitutional provision. Now you propose to take out and destroy it as a stream flow and put in and classify underground water with sub-surface flow.

MR. PARDEE: How would this do: [Underground water . . . is defined as any water that occurs or is found beneath the surface of the ground] “[o]utside limits of defined stream.”

....

MR. CUTTLE: All I seek is to determine what is underground stream and what is percolating water.

MR. KEECH: . . . This sub-surface flow is an all important matter and it is so radical a departure from the law that I do not think it would stand. I think you have attempted to incorporate riparian law in accordance with the decisions of the courts, but now you take that underground flow right out of the rule and class it with water with which it has never been classed; and since you provide for both kinds of water, why have you made that radical change?

MR. PARDEE: Put right at the end of the sentence “Exterior to banks of streams” . [“Underground water, for the purpose of this Act, is defined as any water that occurs or is found beneath the surface of the ground exterior to banks of streams.”]

***290** MR. KEECH: I should say [except] “Sub-stream flow.” You have not defined stream flow, but nevertheless it is defined under the law. You have not defined stream, but that is a term known to the law. Either would be satisfactory to me.

MR. PARDEE: You want it confined to the banks of a stream?

MR. KEECH: Yes, that is all right. . . .

[It was then suggested that confining sub-stream flow to the banks of the stream was too narrow a definition, narrower than the court had already determined in Pomeroy].

....

MR. KEECH: What would you say?

MR. SHORT: I would say stream flow and nothing more.

....

MR. TAIT: I would say just [water that occurs or is found beneath the surface of the ground] “[o]ther than stream flow” .

MR. CUTTLE: Would not this difficulty crop up of determining what is underground stream flow or percolating water?

MR. SHORT: You cannot get rid of this difficulty. The rights of one kind of water is [sic] of one nature, and of the other kind of water of another nature. You want to leave the stream unimpaired and call all other kind of water underground water.

....

MR. WIEL: I suggest this Bill have two or three chapters, underground water and stream flow,- and provide that no water that directly effects [sic] a surface flow shall be affected by this [underground] chapter.

...

....

MR. SHORT: My suggestion would be that the Act, the general scope, should apply to all waters now unappropriated as stream flow, and to all underground waters other than stream flow. When you say that you have done the best you can. [\[FN114\]](#)*291 It is clear from this colloquy that the men who drafted the Conservation Commission's bill understood that any line separating groundwater from surface water was a human construct made for some managerial purpose, rather than a line separating two distinct hydrological entities. Notably, no one made reference to the formalism of Kinney, or to traditional conceptions of “subterranean streams.” They seem to have understood perfectly well that water was a continuum. They conceived their task as drawing a functionally useful, if hydraulically arbitrary, line at what was effectively part of the stream flow. Their purpose was to define what uses would come within the bill's provisions dealing with “underground water,” such as section 13, and “appropriators of waters from the streams,” such as section 17. As Samuel Wiel--the leading water law authority of his day, and a participant in the above-quoted colloquy--put it, what was needed for that purpose was a definition sufficient to protect streams against pumping that “directly effects [sic] a surface flow.” [\[FN115\]](#)

Both the Commission's original bill and the above discussion demonstrate that these water experts, as of 1913, did not believe groundwater was too mysterious in its ways to be subject to legal control. The commonly heard notion that people back then still considered groundwater incapable of management is simply wrong. [\[FN116\]](#) As we shall see shortly, the legislative reluctance to institute integrated management was fundamentally based on legal reservations, not technical or managerial ones.

*292 By the time the Commission's bill was introduced in the Assembly some seven months later, it had been extensively revised. [\[FN117\]](#) Though we have the bills themselves, and the votes on various amendments, the full history of the legislation's development during the legislative session is lost (or at least has not yet been found), though we do have numerous newspaper reports on the bill's progress through the legislature. Most importantly, we have the bill originally drafted by the Commission, and a full transcript of the hearings (from which the above excerpts were taken) in which many--probably most--of the most influential figures participated. [\[FN118\]](#) It appears there was another somewhat modified version that appeared between the time of the Commission draft and the first introduced bill, and there is a law review commentary discussing it in some detail, [\[FN119\]](#) but the draft itself has not been found. From the commentary, it appears to have been very similar to the bill introduced in the Assembly. [\[FN120\]](#) As can best be gleaned from the law review text, that draft contained nothing new or significant relating to groundwater.

No explicit evidence of authorship has been found as to any of the bill drafts or amendments, but an undated document supporting the law, written just prior to the time it was submitted to a public referendum in 1914, has been found among Governor Pardee's papers. That document says “This Water Commission Law was drawn by the State Conservation Commission, aided by a number of prominent attorneys, among whom may be mentioned Judge Curtis H. Lindley, of San Francisco; Judge Farraher, of Siskiyou; E.E. Keech, of Santa Ana.” [\[FN121\]](#) In Pardee's hand there is an insert at this point saying “Mention any others you may think of.” [\[FN122\]](#)

Assemblyman W.A. Johnstone introduced Assembly Bill No. 642 on January 23, 1913. [\[FN123\]](#) The bill seems

to follow Wiel's advice given in the hearings (though not his more general groundwater proposals in his *293 1914 law review article). [FN124] The bill makes no distinction between surface water and groundwater, but simply covers "water" generally. [FN125] It establishes a permit system for the appropriation of all water which has never been appropriated or applied to riparian use, [FN126] recognizes existing appropriations, and abolishes unused riparian rights after five years from the time the bill is enacted. [FN127] This is not different in substance from what the original Commission bill sought to do, as it would have created an appropriation permit system for both groundwater and surface water. Unlike the original Commission draft, it did not take up groundwater and surface water in separate provisions. By creating a unified system of appropriation applicable to all water, the bill as introduced avoided the need to define or distinguish surface water from underground water, the issue that had so troubled the Commission members and their advisors during the hearing quoted above. [FN128] Section 42 of the introduced bill simply says "[t]he word 'water' in this act shall be construed as embracing the term 'or use of water'; and the term 'or use of water' in this act shall be construed as embracing the word 'water.'" [FN129]

That approach did not last for long. The very first amendment to the bill, dated April 2, added the following sentence to section 42 stating "[w]henver the terms stream, stream system, lake or other body of water occurs in this act [and those were the operative terms for water in the bill], such term shall be interpreted to refer only to surface water." [FN130] Surprisingly, this significant change from both the Commission draft and the bill as introduced, sweeping away governance of groundwater, appears to have generated no controversy, and to have been acceptable to the supporters of the bill. [FN131] The most likely reason is that they had been persuaded that subjecting groundwater to the same permitting system as surface water exceeded the state's authority, and thereby hangs a most significant tale. [FN132]

While I have found nothing documenting the thinking of those *294 who drafted the amendment, there is some highly revealing material in the Commission's hearings during the previous year, and doubtless those who participated in the Commission's hearings also participated in the development of the bill as it moved through the legislature. On the same day the colloquy excerpted above took place, there was also a discussion of the scope of legislative permitting authority over groundwater. The Commission's discussion had moved on from section 8 to section 11 of the bill. [FN133] The section dealing with groundwater provided "[o]wners of overlying land shall have the right to use such underground water on such overlying land only, and such use shall be for useful and beneficial purposes only, and may be had without appropriating the same or filing notice of appropriation." [FN134] Section 13 said that "[t]he right to appropriate underground water for use on other than overlying land may be acquired by filing application for appropriation of such underground water with the said Water Commission . . . and complying with all conditions required from appropriation of water from streams of water. . . ." [FN135] And section 27 of the bill gave the Water Commission broad discretion to impose conditions through adoption of rules and regulations that limited the extent and purposes for which appropriations could be made. [FN136]

These provisions generated a lively discussion about the nature of a landowner's existing property right to use groundwater. All agreed that beneficial overlying uses should be recognized, and that any uses had to respect the rights of others, as *Katz v. Walkinshaw* had held. [FN137] The question was whether the legislature had the authority to subject non-overlying uses to a discretionary permit system parallel to the one that applied to surface streams. The claim effectively was that there was an important legal difference between the status of surface streams, whose unappropriated water belonged to the public, and underground water in which--though subject to correlative rights--the overlying owner held a property interest. If there was a pre-existing property right (even though it was not the absolute ownership of the common law, and was correlative with other rights as per *Katz*), then arguably the effort to give a Commission fully discretionary permitting authority--to deny a permit for some reason other than to protect another's water rights--was at odds with the landowner's property interest in groundwater beneath his land. [FN138]

Wiel started the discussion, saying "[i]f you give somebody the right to appropriate water you assume the right to take it away from *295 them." [FN139] Frank Short added "[h]ere [in the bill] it says they cannot take water from land and put it upon other land. Now [under existing law], they have the unrestricted right to take water from any

land and put it upon any other land. . . .” [\[FN140\]](#) Then, following some further discussion of this point, Short made the following statement:

MR. SHORT: A man has as much right to extract water as coal[,] oil or any other part of the substance of this land, and the only limitation in the doing of that is he must not take it in such a way as to injure his neighbor. That is the settled right in property. Over the water percolating the ground he has the power the same as over other property; it is no more a jurisdiction over the underlying, percolating water than it is over any other substance in the ground. . . .

. . . .
MR. LANE: . . . The only question is, would it be unconstitutional as restricting the use of property, if it required the owner of lot A to get a permit before he could transport it to lot C. That goes to the constitutionality and not to the question of policy.

. . . .
MR. PARDEE: Who owns the water underground?
MR. SHORT: The land owner.
MR. PARDEE: The ownership of the corpus of the water?
MR. SHORT: Sure, yes sir. When you say that something which is now permitted by law cannot be done, and do say that something different can be done in a different way, it seems to me the Legislature would have no authority to do that.

. . . .
If the law gives the right, as the law now is, we would not object to restriction possibly, but to say it is unlawful without appropriation to take water from overlying land to some other land, it would prohibit the use of underground water. . . .

. . . .
What we object to is that we cannot use water where we now have the right to its use, and this law would do away with a right that now exists.

MR. CUTTLE: Write a section for that.

MR. SHORT: All right, I will do that. [\[FN141\]](#)*296 This discussion suggests that Short, who was an influential representative of Central Valley agricultural interests, had raised doubts in the minds of the legislation's supporters about the constitutionality of imposing a discretionary permit system on the use of groundwater on non-overlying land. [\[FN142\]](#) Of course, the Commission had never intended to require a permit for use on overlying land, which was considered a parallel to riparian uses of surface water. [\[FN143\]](#) Therefore, it was not surprising that an amendment to limit the coverage of the bill to surface waters was proposed during the legislative debate. [\[FN144\]](#) There seems to have been no controversy over this amendment, suggesting that Short's legal argument was persuasive. [\[FN145\]](#)

It should be emphasized Short's claim was a limited one. He did not assert there was no regulatory authority over non-overlying uses of groundwater, or that such uses could not be integrated with surface water rights. He was simply objecting to giving a permitting agency discretionary authority to deny such uses altogether, except where it was necessary to protect some other right in that water, such as a correlative right by another groundwater user. [\[FN146\]](#) Short was thus *297 apparently making a claim that the plenary power and proprietary interest in surface waters did not extend to groundwater; and that property rights in groundwater were, though not absolute, nonetheless an extant incident of landownership. Though such a claim would hardly be likely to prevent a grant of discretionary permitting authority under contemporary understanding of state legislative authority, [\[FN147\]](#) it apparently was persuasive to legislators back in 1913. [\[FN148\]](#) This seems to explain why California decided to grant permitting jurisdiction over surface water, but not groundwater. [\[FN149\]](#)

In any event, the legislative decision created the need to distinguish groundwater from surface water, again raising the problem that had come up during the discussion of the Commission's original draft. What, if any, water beneath the surface of the earth should be included in the term “surface water,” and subject to permitting jurisdiction? Certainly, no one wanted a user to be able to circumvent the law simply by diverting from a reach of a surface stream where the water sank below the surface before emerging again, or by sinking a well in a riverbank.

The General Assembly addressed this issue on April 30, when the following italicized language was added to section *298 42: “Whenever the terms stream, stream system, lake or other body of water or water occurs in this act, such term shall be interpreted to refer only to surface water, and to subterranean streams flowing through known and definite channels.” [\[FN150\]](#)

This, of course, is the language from the Pomeroy decision. [\[FN151\]](#) It was enacted into the Water Commission Act of 1913, [\[FN152\]](#) and it remains today, with only insubstantial change, as [section 1200](#) of the Water Code. [\[FN153\]](#) Strikingly, this “subterranean stream” language appeared for the first time at a late stage in the evolution of the law. It never came up in the Commission’s report, [\[FN154\]](#) in its original bill, [\[FN155\]](#) in any of three Commission hearing sessions on the bill, [\[FN156\]](#) or in the bill as first introduced in the Assembly, [\[FN157\]](#) even though, as we have seen, efforts to distinguish surface water and underground water had engaged the bill’s drafters at some length in the May 28th hearings the previous year. [\[FN158\]](#) None of the suggested phrasing put forward in that hearing, such as “sub-stream flow,” “sub-surface water in the same bed” or “underground stream flow” [\[FN159\]](#) appeared in the final bill as enacted. [\[FN160\]](#)

Why did the bill’s drafters use the Pomeroy language, which drew on the formalistic approach of the Kinney treatise, rather than one of the phrasings that had been suggested in the previous year’s hearings? No documentation has been found to answer this question, or to explain the reasoning for any of the other amendments made to section 42 of the bill. [\[FN161\]](#) The likeliest explanation is that, rather than *299 seeking to devise their own language to identify the subsurface water that should be included within the surface water system (and recognizing, after the previous year’s hearing, the difficulty of fashioning satisfactory language), they simply plugged in familiar language that was already a part of water law terminology: “subterranean stream [etc.]” The fact that the Pomeroy approach to groundwater law had been superseded by the California Supreme Court in Katz and other decisions discussed above, [\[FN162\]](#) apparently never came up in the legislative process. Nor did the fact the Pomeroy opinion is very confusing, and its intended scope very uncertain (it is routinely cited as support by both sides in litigation), seem to deter the legislators. In fact the Pomeroy/Kinney language - so patently inapt, and inept to us today - seems to have generated not a word of controversy in a bill that was otherwise so controversial and divisive that it only became law by virtue of a public referendum. [\[FN163\]](#)

There is nothing in any available documentation of the legislative history to suggest the drafters intended to codify the Pomeroy case, though they did obviously take language from the opinion. [\[FN164\]](#) Since, as indicated earlier, Pomeroy had been largely repudiated by later decisions, [\[FN165\]](#) and its intent was in any event more than a little uncertain, the notion it was being “codified” by the adoption of some of its language is itself a rather fuzzy notion. We simply have no evidence of whether, or how, the legislators, in adopting the subterranean stream formula, meant to address the geologic perplexities they were creating in treating groundwater and surface water as separate entities.

While we cannot know anything for certain, based on what we do know, the following is the most plausible explanation of legislative intent. Once the legislature was persuaded that there were constitutional problems in creating an integrated system, which is what the Commission and the Johnstone bill had originally sought; they reconciled themselves to a bifurcated system, and sought to make sure that they prevented the most egregious opportunities for people to subvert the surface water permitting system. The subterranean stream language of Pomeroy was the only established verbal tool for doing so, as it clearly covered what had been described in the hearings as “sub-surface flow” of surface streams, [\[FN166\]](#) or what Wiel had earlier described as a line that would protect streams against pumping that “directly *300 effects a surface flow.” [\[FN167\]](#)

In short, the evidence we have indicates the legislative language was designed to exclude groundwater generally, except for groundwater functionally part and parcel of a surface stream - in the sense that pumping it directly affected surface flow. Probably - although there is no evidence one way or another - the legislators would also have meant to include true subterranean streams, such as flows in limestone caverns or lava tubes, which would be “independent” subterranean streams under Kinney’s classification. But even in 1913, it was clear that such

features are few and of rare occurrence in California. [\[FN168\]](#)

The Water Commission legislation was extremely controversial, though not on the subterranean stream issue. Its far more significant provisions sought to control monopolization of water by riparian landowners (a matter that would ultimately be resolved by a Constitutional Amendment several decades later), [\[FN169\]](#) and to get rid of unused riparian rights (a provision held unconstitutional, [\[FN170\]](#) but ultimately achieved by California Supreme Court interpretation). [\[FN171\]](#) The bill passed the Assembly by a vote of 44-30, [\[FN172\]](#) and the Senate version by 28-6. [\[FN173\]](#) The Assembly then concurred on a 41-10 vote (41 votes being required for passage). [\[FN174\]](#) The Governor signed the bill on June 16, 1913, [\[FN175\]](#) however, it was then subjected to a referendum following an all-out effort by the law's opponents. California voters approved the referendum on November 3, 1914, by a margin of 50.7% to 49.3%. [\[FN176\]](#) It became effective on December 19, 1914.

B. Subsequent Legislative Developments

Almost as soon as the Water Commission law was enacted, proposals emerged to revise it and create an integrated management system for surface and groundwater. As early as 1916, the report of a legislatively created Water Problems Conference recommended that groundwater be made appropriable and “placed under the control of the State Water Commission.” [\[FN177\]](#) In 1917, the State Water *301 Commission's annual report cited “the need of [ground water] legislation” and opined that:

surface and ground water supplies are so intimately related physically that one can not be completely regulated and administered without similar control of the other. . . . [T]he fact that the water passes beneath the surface and is for a time hidden from view to again reappear farther down the stream, does not offer a logical reason for its exemption from control and regulation. [\[FN178\]](#)

In 1957, the State Water Plan observed that:

[w]hile it is not an immediate problem, it is evident that effective administration of the development and utilization of ground water resources, either by the State or by local agencies, or by both, will become mandatory as the stage of full water development is approached. When it becomes necessary to operate the major ground water basins for import-export purposes as envisioned under The California Water Plan, requisite authority to do so must exist. . . . The following [item is] suggested for consideration in this connection: . . . The requirement of permits and licenses for the appropriation of ground water. [\[FN179\]](#)

In 1971, the chair of the Assembly Committee on Water made two very modest legislative proposals: including groundwater in the existing statutory adjudication procedures, and requiring pumpers statewide (not just in four southern counties) to file statements of the amounts they were pumping. [\[FN180\]](#) His suggestions were not enacted. Two years later, Ronald Robie, a respected water law expert who became director of the Department of Water Resources (and later a judge), gave an address in which he said “‘ad hoc’ solutions are not satisfactory. I find it curious that although regulation of surface waters is properly a responsibility of the State, groundwater regulation is somehow viewed as a ‘local’ concern. . . . The result is uncoordinated administration of interrelated resources.” [\[FN181\]](#)

*302 Four years later, the background study for the Governor's Commission to Review California Water Rights Law posed the questions: “Should permits be required for new wells where critical groundwater problems exist or are threatened? For new wells in all basins? For all wells, new and existing, where critical groundwater problems exist or are threatened? For all wells in all basins?” [\[FN182\]](#) The Commission itself, however, acknowledged what had become the political reality when it came to groundwater law reform. After noting that “[m]ost other western states have integrated groundwater into state-level appropriation permit systems,” it stated that “California's experience with groundwater management . . . differs from that of other western states.” [\[FN183\]](#) The report therefore concluded “that local management, if it is properly undertaken, offers the best opportunity for workable and effective control.” [\[FN184\]](#) To make clear that it was not calling for anything like a general permitting system, it said “[t]he Commission . . . intends that proposed legislation not require any unnecessary management actions in areas without critical long-term overdraft, subsidence, or water quality problems.” [\[FN185\]](#)

The Governor's Commission correctly read the political situation in California. No pleas for integrated management of surface and groundwater generated statutory change. In a progress update written in 1988, attorney Kevin O'Brien reported "[t]he California Legislature has flirted with the concept of ground water management during the past several legislative sessions. To date, no comprehensive ground water management legislation has been adopted." [\[FN186\]](#)

On the contrary, the legislature made clear its disinclination to enact comprehensive legislation or to expand the Board's permitting jurisdiction over groundwater. [\[FN187\]](#) The subterranean stream provision of [section 1200](#) of the Water Code remains virtually unchanged from what it was in 1913. [\[FN188\]](#) Indeed, in a variety of statutory provisions as well as legislative studies, the legislature's posture toward statewide groundwater management is unambiguous. For example:

***303** • In 1962, an Assembly Interim Committee Report, concluded that "[i]n most areas of the State, the key to the solution of ground water problems lies in local attitudes and political feasibility." [\[FN189\]](#) "Water agencies expressed a strong desire to solve their problems themselves and to manage ground water basins locally. The committee agrees that local management is desirable and . . . provides simplified solutions to many of the ground water basin management problems." [\[FN190\]](#)

- In 1984, in legislation granting area-of-origin rights to a variety of water systems as against future export projects initiated after a certain date, the legislation was careful to distinguish between surface water appropriations dated by the time of "applications [before the Board] to appropriate," and groundwater appropriations, dated by the time they are "initiated" [outside of any permitting process]. [\[FN191\]](#)

- Because the Article containing the area-of-origin law was codified in the midst of a chapter of the Water Code that deals with the Board's administrative responsibilities, the legislature added section 1221, stating "[t]his article shall not be construed to authorize the board to regulate groundwater in any manner." [\[FN192\]](#)

- The provision that grants the Board authority over general adjudications of stream systems specifically excludes "an underground water supply other than a subterranean stream flowing through known and definite channels." [\[FN193\]](#)

- In one instance where it did give authority to adjudicate a river, the Scott River, including interconnected groundwater, the legislature specified that the decision was "necessary . . . for a fair and effective judgment of . . . rights" in that particular river, but declared it "necessary that the provisions of this section apply to the Scott River only." [\[FN194\]](#) Ironically, the studies that led to the Scott River legislation demonstrate the legislature had been fully and unambiguously informed of the inadequacies of the bifurcated (groundwater and surface water) system it had created. [\[FN195\]](#)

***304** • Even where the legislature has wanted the Board to act generally as to groundwater--as with water quality adjudications--it has been careful to require it to go to court, [\[FN196\]](#) and to defer to local public agencies. [\[FN197\]](#)

- Where the legislature wants to include "percolating groundwater" within the coverage of a statute, it does so explicitly, as in a law requiring recordation of certain groundwater extractions. In that law, the definition section says "'[g]round water' means water beneath the surface of the ground whether or not flowing through known and definite channels." [\[FN198\]](#)

- Finally, the legislature has made clear its view that its preferred way of dealing with groundwater is through local, basin-specific management, a position it has held quite consistently over many years. [\[FN199\]](#)

This brief review makes clear that the legislature has repeatedly been made aware of the Board's limited jurisdiction over groundwater under [section 1200](#) of the Water Code, and has shown no inclination to expand that jurisdiction beyond the legislative goals that led to the language in the 1913 statute.

IV. HOW SHOULD [SECTION 1200](#) OF THE WATER CODE BE INTERPRETED?

The above analysis of the Water Commission Act's history reveals the legislative purpose of the "subterranean stream" provision was to protect the integrity of the permitting agency's jurisdiction over surface stream appropriations. The means for achieving that goal was the prevention of unpermitted pumping of groundwater that appreciably and directly affected surface stream flows. The authors of the Act essentially sought to close a loophole that left the permitting agency powerless when a pumper took water from a subsurface location and directly impacted the flow of a surface stream. At the same time, it is clear the legislature did not intend to create permitting jurisdiction over all groundwater pumping that would in any way, or at any time, affect surface streams. The statute undoubtedly meant to leave much tributary groundwater as part of a separate legal regime outside the permit system being established. While the "subterranean *305 stream" language in the Water Commission Act was almost certainly generated by concern about pumping from areas that were very proximate to the surface stream, such as what is called underflow or subflow, the central concern was impact, not proximity. [\[FN200\]](#) It should be kept in mind that modern-day high-powered pumps were not extant at that time.

My conclusion is that the Assembly designed the legislation to create an impact test (impact of pumping on surface stream flows), and to extend the Board's jurisdiction to pumping that has an appreciable and direct impact upon a surface stream. To be sure, any test of impact necessarily involves a judgment about the boundaries of inclusion and exclusion. This is an unwelcome task imposed by any regime that treats groundwater and surface water separately; although even in states where groundwater and surface water management is fully integrated, judgments must be made about the point at which pumping impacts on surface streams are sufficiently attenuated in time or impact that they should not be considered. [\[FN201\]](#) In any event, any such line drawing represents a policy judgment, not a technical one. Since the groundwater and surface water within a watershed essentially constitute a continuum, any test intended to separate one part of the groundwater from another inescapably requires a judgment that reflects a purposive goal, rather than reflecting a technical line of demarcation that hydrogeologists or other scientific experts utilize and for which there is a technically accepted definition.

It may be objected that an impact test is at odds with the explicit language of [section 1200](#) of the Water Code, whose terms literally describe a geographic test, rather than an impact test. [\[FN202\]](#) The statute would seem to require a search for a definite channel and for flowing water, etc. Such a geographic test is what the Board has traditionally applied, searching out the limits of a bed and banks, appraising whether the water was flowing rather than merely percolating, and asking whether it was moving parallel to a surface stream, as part of a definite channel. [\[FN203\]](#) While the unambiguous meaning of statutory *306 language should prevail over efforts to decipher legislative history, it can hardly be thought that the meaning of the words in [section 1200](#) are unambiguous, though the terms themselves--like channel, flowing, and stream--seem clear enough. The problem is that the words used in this statute describe a legal fiction. With only the rarest exceptions, there is no "flowing" water underground in California, and nothing that meets the ordinary notion of a stream. Ground water percolates through earth, which is more and less porous. Nor can it be concluded that the legislature "clearly" intended to codify some particular definition embodied in the Pomeroy case, since lawyers have unceasingly disputed, for nearly a century, the meaning of the complicated and confusing decision in that case. [\[FN204\]](#) Thus, conventional canons of construction in interpreting statutory language do not fit the circumstances of [section 1200](#) of the Water Code.

Sometimes statutes use words that are unambiguous in themselves, and that have a literal meaning, but where that meaning plainly does not describe legislative intent. Perhaps the most notable example is found in a United States Supreme Court decision in which an individual sought to stake a claim on groundwater under federal mining laws, claiming the mining law covered every "valuable mineral," and that groundwater was--unambiguously--a

valuable mineral. [\[FN205\]](#) The Court sensibly held that in this instance Congress did not mean what it had literally said: it was indisputable that the valuable mineral of water was not meant to be appropriated under the law that governs gold, silver, and other such valuable minerals. [\[FN206\]](#) The extant history of the Water Commission Act is similarly persuasive as to the gap between usual literal meaning and legislative intent. Here the purpose of the provision in question was to insulate surface stream flows from those groundwater diversions that would have a direct and significant impact on the surface stream, rather than to seek out some particular configuration of water as it moved underneath the earth's surface.

V. EXISTING AUTHORITY FOR MANAGEMENT OF GROUNDWATER OUTSIDE WATER CODE [SECTION 1200](#)

While [section 1200](#) of the Water Code has been the centerpiece of legal dispute concerning administrative jurisdiction over groundwater, that provision is not the only source of Board jurisdiction over groundwater. Conversely, even a very expansive interpretation of [section 1200](#) would not bring all groundwater under Board authority. Two important qualifications must be added to any discussion of the scope of [section 1200](#) of the Water Code. First, even if the definition [*307](#) of a subterranean stream were very expansively interpreted, the Board's permitting jurisdiction would still not embrace uses of that water on overlying land. Second, there are other potentially available sources of Board authority over the use of subsurface water, outside of [section 1200](#)'s permitting jurisdiction.

A. Overlying Uses of Groundwater

Land overlying a subterranean stream is considered riparian to that stream, [\[FN207\]](#) and it has always been understood that “[a] riparian is entitled to pump and use water on a parcel which overlies a subterranean stream” just like a riparian on a surface stream, without seeking a permit from the Board. [\[FN208\]](#)

While there is no authoritative source of data as to how much groundwater is used on overlying riparian land, and how much is being applied to non-overlying land, there is little doubt that a considerable percentage of groundwater is being used on riparian overlying land. Thus, it would be outside the Board's permitting jurisdiction, no matter how expansively the statutory category of “subterranean streams flowing through known and definite channels” was applied. The following estimates, provided by the Association of California Water Agencies (“ACWA”) in response to an inquiry by the author of this article, give a rough sense of the scope of the issue:

For example, in Ventura County, the total groundwater pumping is about 70% agricultural and 30% municipal and industrial (M&I). It can be assumed that essentially all the M&I usage is not overlying. . . . Assuming that some of the agricultural pumping is not overlying, then the total non-overlying usage could rise to at least 50%. . . .

Of course, this will vary considerably by county. Its likely that a county in the northern Sacramento Valley could have the highest percentage of overlying land use whereas urban counties such as Los Angeles or Orange could have the lowest percentage. Again, this is all very theoretical and conditions could dramatically vary for each and every county in California. [\[FN209\]](#)[*308](#) Whatever the actual numbers, it is significant that concerns about non-regulation of groundwater use are not attributable solely to restrictions imposed under interpretations of [section 1200](#) of the Water Code, and that expanded interpretation of that statutory provision would primarily affect municipal and industrial users of groundwater, rather than agricultural pumpers.

B. Other Sources of Authority Over use of Groundwater

1. [California Constitution Article X, Section 2](#), [California Water Code Section 100](#), the Public Trust, and [California Water Code Section 275](#)

While [section 1200](#) of the Water Code limits the Board's permitting jurisdiction over groundwater, it does not limit other sources of authority that may be available to the Board to regulate uses of groundwater. A lively current question is whether, and to what extent, the Board may restrict pumping of percolating groundwater that is adversely affecting surface instream benefits, such as fish populations and riparian values. The Board's attorneys are of the view the Board has authority to control such uses where they either: (1) violate the prohibition of the Constitution and the Water Code on waste and on unreasonable use and methods of use; or (2) violate the public trust.

Both jurisdictional and substantive issues arise. In terms of jurisdiction, there are two distinct issues. First, does the Board have authority to take jurisdiction itself, and to issue remedial orders against users water users over whom it has no permitting authority? [\[FN210\]](#) Second, may the Board go to court and seek judicial relief? Substantively, what constitutes waste and unreasonable use in the context of groundwater use that affects surface stream values, and does the public trust extend to groundwater uses at all? [\[FN211\]](#) Since this article deals only with the Board's permitting and regulatory jurisdiction, the following discussion is limited to that issue, not with the questions regarding what constitutes waste and unreasonable use, or what constitutes a violation of the public trust. [\[FN212\]](#)

***309** Assuming that a substantive violation exists, there is no doubt [\[FN213\]](#) that the Board, through the California Attorney General, [\[FN214\]](#) can institute litigation to control groundwater use that: (1) constitutes waste, unreasonable use, or method of use within the meaning of [article X, section 2 of the California Constitution](#), and [section 100](#) of the Water Code; [\[FN215\]](#) or (2) violates the public trust. [\[FN216\]](#) An Arizona case filed, but not decided on the merits, asserted the Arizona Department of Water Resources has an affirmative duty to use the public trust to protect the state's watercourses from adverse affects of groundwater pumping. [\[FN217\]](#) However, there may still be some question whether the Board can assert its own jurisdiction to adjudicate and remedy complaints about groundwater control where it otherwise has no jurisdiction over the respondent, [\[FN218\]](#) though the California Supreme Court said that claims of unreasonable uses of water or of harm to the public trust “may be brought in the courts or before the Board.” [\[FN219\]](#)

Board jurisdiction in such situations is said to be founded primarily on [section 275](#) of the Water Code, [\[FN220\]](#) secondarily on section 174 of the ***310** Water Code, [\[FN221\]](#) and perhaps on substantive provisions [article X, section 2 of the California Constitution](#), which is self-executing, and on its statutory parallel, [section 100](#) of the Water Code. There is one California Fourth District Court of Appeal decision directly on point, though it did not involve groundwater.

In *Imperial Irrigation District v. State Water Resources Control Board* (“IID II”), the issue was whether the Board could take jurisdiction over pre-1914 surface water appropriations in order to determine whether the water was being unreasonably used in violation of [article X, section 2 of the Constitution](#), or whether a complainant would have to go to court to raise and adjudicate such a claim. [\[FN222\]](#) The argument was that the Board had no pre-existing jurisdiction over the Imperial Irrigation District's (“IID”) pre-1914 appropriations; and that the statutory provision upon which the Board relied was not a grant of jurisdiction to it, but simply an authorization to the Board to go to court to seek relief. The provision in question was [section 275](#) of the Water Code. IID claimed this provision was a restriction on the Board-- directing it to petition other agencies to grant relief for violations--rather than a grant of jurisdiction to act on its own. [\[FN223\]](#) Even if such a claim were to prevail, however, courts have broad authority to refer any and all issues to the Board. [\[FN224\]](#)

The court expressly rejected IID's claim, and said it saw no distinction between the IID II case and an earlier case, *Environmental Defense Fund v. East Bay Municipal Utility District* (“EDF I”). [\[FN225\]](#) EDF I sustained Board jurisdiction over a claim of waste and unreasonable use under [section 275](#) of the Water Code. [\[FN226\]](#) However in that case, the Board already had jurisdiction over the water user, one of its permittees. [\[FN227\]](#) Similarly, in the *National Audubon Society Mono Lake* ***311** case, which began in court, not before the Board, Los Angeles was already within the Board's jurisdiction before the public trust claim arose. [\[FN228\]](#)

The Imperial Irrigation District v. State Water Resources Control Board (“IID I”) decision says that “[n]o case has construed [section 275](#) as a limitation on the Board’s adjudicatory power. In fact, EDF I, which holds the Board had exclusive adjudicatory jurisdiction . . . cites [section 275](#) in support of its conclusion the Board’s ‘powers extend to regulation of water quality and prevention of waste.’” [\[FN229\]](#) The court in IID I relied in addition on the so-called Racanelli decision, [\[FN230\]](#) which also cited [section 275](#) of the Water Code as authority for the proposition that the Board has “the separate and additional power to take whatever steps are necessary to prevent unreasonable use or methods of diversion.” [\[FN231\]](#) The court in IID I concluded “[section 275](#) is not to be construed as a limitation on the Board’s adjudicatory authority, but rather as a statute granting separate, additional power to the Board.” [\[FN232\]](#)

The California Supreme Court has not yet expressly addressed the question whether [section 275](#) of the Water Code provides an independent source of jurisdiction over pumpers of percolating groundwater. However, the holding in IID I, along with the language of EDF I and the Racanelli decision, are significant authority in favor of the claim that the Board can assert jurisdiction over percolating groundwater pumping to adjudicate and remedy claims that come within the scope of waste and unreasonable use covered by [section 275](#) of the Water Code. Such jurisdiction could be a powerful tool to deal with pumping that impairs instream flows needed to protect fish and riparian values, one of the major issues underlying complaints urging the Board to take a broadened view of its jurisdiction under [section 1200](#) of the Water Code. [\[FN233\]](#)

Of course, IID I is a court of appeals case, not a supreme court ***312** decision, and it deals with surface water. It remains to be seen if the supreme court’s language in EDF I will be applied to groundwater, where there is no pre-existing Board jurisdiction. No doubt the claim will be made that percolating groundwater is a special case, and that the legislature has taken special pains to restrict Board jurisdiction over groundwater, specifying those (few) instances in which it believes such jurisdiction may be exercised. [\[FN234\]](#) In anticipation of any such claim, however, one should recall that back in 1912 and 1913 the only expressed objection to jurisdiction over groundwater arose over a discretionary permitting system that could deny a landowner appropriation of water despite an adequate supply. [\[FN235\]](#) Both the supreme court and legislature acknowledged, even then, that when groundwater pumping adversely affected other water rights, pumping could be regulated and restricted. [\[FN236\]](#)

The scope of Board jurisdiction over groundwater to protect instream values was questioned in North Gualala Water Company v. State Water Resources Control Board. [\[FN237\]](#) In that case, the Board had jurisdiction over a surface appropriation, which was conditioned by a bypass flow provision. The permittee then sought a permit (presumably out of an abundance of caution) to change the point of diversion to a well, while simultaneously asserting the well did not pump subterranean stream water, and that the stream was not recharging it anyway. [\[FN238\]](#) The Board nonetheless insisted on maintaining the bypass flow condition on the well, and declined to adjudicate the subterranean stream question, ***313** saying that issue was not properly before it. [\[FN239\]](#) Nonetheless, the Board made clear its understanding that it had jurisdiction whether or not the well in question is pumping subterranean stream water. [\[FN240\]](#) The applicant filed suit in superior court seeking a determination that it was not pumping subterranean stream water and that the Board had no jurisdiction over its well. [\[FN241\]](#) The case potentially presented a most interesting issue: if the facts showed that the new point of diversion, the well, was pumping tributary groundwater with virtually the same impact on instream values as the previous surface diversion, but that legally the well was pumping percolating groundwater, has the Board now lost jurisdiction over the diversion? If so, could it take jurisdiction anew under [section 275](#) of the Water Code? The most recent development, as this article was being written, was a new draft order by the Board (cited above) finding the water in question was a subterranean stream. [\[FN242\]](#) The North Gualala Water Co. case, or one like it, will eventually work its way through the courts and clarify the scope of the Board’s asserted independent authority over percolating groundwater that threatens surface stream values in violation of the values protected under [section 275](#) of the Water Code.

2. Remedies for Impairment of Water Rights

While California does not have an integrated permit system for administering surface and groundwater use, the California courts have protected surface stream rights against groundwater pumping, and vice *314 versa, at the behest of the injured party, for nearly a century. [FN243] For example, in a 1904 case, *Cohen v. La Canada Land & Water Company*, the California Supreme Court protected a prior appropriator from a surface stream against a subsequent appropriator of tributary percolating groundwater. [FN244] Similarly in *City of Lodi v. East Bay Municipal Utility District*, the court protected a prior appropriator of percolating groundwater against a subsequent appropriator of surface stream water. [FN245]

In a 1903 decision, a riparian surface stream user was protected against an appropriator of percolating groundwater. [FN246] The court also protected Los Angeles' paramount pueblo rights in the Los Angeles River against diminution by pumping of tributary percolating groundwater. [FN247] Still, another early case applied the correlative rights doctrine as between a riparian user of a surface stream and an overlying user of tributary groundwater. [FN248]

The effective result of all these cases has been to implement integrated management of water rights, in hydraulically connected groundwater and surface stream water, through the medium of private litigation. [FN249] Needless to say, the courts also collectively manage surface water rights with subterranean stream water uses and have, for example, protected a senior surface appropriator against a junior pumper. [FN250] Indeed, it may be that the determination of the California *315 Supreme Court to integrate groundwater and surface water rights in litigation explains, at least in part, how California law has been able to endure the “non-administration” of groundwater under [section 1200](#) of the Water Code for so many decades.

Nor need all such cases be remitted to private litigation. The Board clearly has and uses its authority to protect groundwater uses when it has jurisdiction over permit applications to appropriate surface water. [FN251] The Board protects groundwater users dependent on recharge from surface streams by determining whether surface water is available for appropriation. [FN252] The Board also has authority to condition surface stream appropriation permits to protect groundwater rights. [FN253] The courts, of course, can also afford such protection in private litigation. [FN254]

VI. A LAST FEW WORDS: WHAT DOES ALL THIS HISTORY SIGNIFY FOR TODAY'S PROBLEMS?

Plainly [section 1200](#) of the Water Code is a relic from another time, and it is hard to imagine any legislature enacting it today. [FN255] Yet *316 it remains the law in California, and, as described above, the legislature shows no inclination to change it. In any event, after all these years, there would be no easy way to comprehensively bring groundwater under the permitting regime that governs surface water. For example:

- A great deal of subsurface water has been pumped for a long time, and any comprehensive permitting system would have to address such perplexing questions as whether a long-standing pumper would be integrated with surface appropriators of the same date, or be treated as a new appropriator, as of the date of a newly required permit application? [FN256]

- Would permitting requirements be applied to adjudicated groundwater rights, and to established groundwater banking programs?

- Since a considerable percentage of pumped groundwater is used on overlying land and is thus riparian, it would therefore be outside any revised permitting system, unless overlying groundwater use was to be treated differently from riparian surface water use.

In light of these difficulties and the greater power of modern pumps, I suggest a practical approach, taking note of the new information about the intended legislative purpose of [section 1200](#) of the Water Code, along the

following lines:

- Adoption by the Board of clear criteria to implement the existing statutory purpose, by taking jurisdiction over new groundwater uses that would diminish appreciably and directly the flow of a surface stream, substituting an impact test for a geographic one; and

- Proactive use by the Board of its authority under [section 275](#) of the Water Code, and any other sources of jurisdiction it has, to implement the constitutional prohibitions on waste, unreasonable use, and unreasonable methods of use; to protect the public trust; and to safeguard established rights in surface ***317** stream flows; and

- Where serious basin-wide problems are presented, comprehensive basin management (as with successful examples of adjudicated/managed Southern California basins) [\[FN257\]](#) as the most promising tool to achieve genuine integration of surface water and groundwater administration in California. This suggestion is made in full recognition of the cost, duration, and complexity usually associated with settling rights generally within a basin. [\[FN258\]](#) Nonetheless, that approach will best position California to address contemporary groundwater/surface-water issues such as professional administration, pumping assessments, importation of new supplies, replenishment programs, achievement of sustainable use, allocation of groundwater storage capacity, quality control, and conjunctive use.

[\[FNd1\]](#). James H. House & Hiram H. Hurd Professor, Emeritus, University of California, Berkeley (Boalt Hall).

[\[FN1\]](#). [Hudson v. Dailey, 105 P. 748, 753 \(Cal. 1909\)](#).

[\[FN2\]](#). To hydrogeologists, water is a continuum. The same water may sometimes be found on the surface of the earth and at other times underground. Water moves by the force of gravity, and whether it is surface water or groundwater at any particular moment depends on the slope (known as gradient) and direction of the medium through which it is moving at a given moment, on obstacles it encounters, and on the topography of the land. Moreover, from a technical perspective, the distinction between percolating groundwater and subterranean streams is meaningless, or nearly so. Water that actually flows like a surface stream beneath the earth's surface, as in lava tubes or limestone caverns, is very rare in California. Virtually all underground water percolates through the ground. It may move more or less rapidly; it may be moving parallel or perpendicular to a surface stream; it may be narrowly confined or broadly diffused underground. From a geological perspective, these factors are simply crude and partial descriptions of the enormously varied behavioral characteristics of subsurface water, depending on a variety of factors, such as the varied transmissivity of the material in which it is found, the varied obstacles it encounters, and the diverse gradients over which it travels in its movement through the earth. In addition, at various points in time or space, groundwater may be in hydraulic connection with a surface stream, or it may be confined, at least for some distance, beneath a quite impermeable layer. Water underground may, at one place, or during one season, seep into a river through its banks (a gaining river), and at another place or time seep out from the banks into the underground (a losing river). It all depends on whether the saturated area of the ground is above or below the riverbank at that point.

[\[FN3\]](#). See generally William Blomquist, *Dividing the Waters: Governing Groundwater in Southern California* (1992).

[\[FN4\]](#). See, e.g., [Cal. Water Code §§ 10753.9, 10754 \(West Supp. 2003\)](#).

[\[FN5\]](#). The term “underflow,” though commonly used in the law, is not a technical term of art used by hydrogeologists. Scientists draw no hydrological line of demarcation between groundwater that is percolating toward a stream, and groundwater that has become part of the stream as “underflow.” As the Arizona Department of Water Resources has explained:

In the ideal, subflow [or underflow] can be visualized as just another part of the stream that lies out of view below the surface. As part of the stream, it also has distinct bed and banks which define its extent.

This ideal concept of subflow actually does exist in narrow bedrock canyon streams where both the surface and subsurface components of the streams are contained within hardrock boundaries. But as these bedrock canyons descend from the mountains, the valleys become alluvial valleys between mountain ranges, where the subterranean component of streams becomes unbounded.

Arizona Dep't of Water Res., Technical Assessment of the Arizona Supreme Court Interlocutory Appeal Issue No. 2 Opinion, in re The General Adjudication of the Gila River System and Source 38 (1993).

[FN6]. In addition, as noted hereafter in the text, the term has been commonly picked up from headnote nine in [City of Los Angeles v. Pomeroy, 57 P. 585, 586 \(Cal. 1899\)](#), and in [Hooker v. Los Angeles, 188 U.S. 314 \(1903\)](#), and is often cited in a way that gives an inaccurate sense both of the trial judge's instructions, and the Supreme Court's decision, in that case.

[FN7]. [Verdugo Canon Water Co. v. Verdugo, 93 P. 1021, 1025 \(Cal. 1908\)](#).

[FN8]. [Huffner v. Sawday, 94 P. 424, 427 \(Cal. 1908\)](#).

[FN9]. [City of San Bernardino v. City of Riverside, 198 P. 784, 787 \(Cal. 1921\)](#).

[FN10]. [Pomeroy, 57 P. at 594](#).

[FN11]. Wells A. Hutchins, *The California Law of Water Rights* 422 (1956) (citations omitted).

[FN12]. The provision of [section 1200 of the California Water Code](#), set out here, defines the scope of Board authority for those provisions in Part II of the Water Code that require Board approval of diversions from a stream, lake, or other body of water. There are other important distinctions, but they are not within the scope of this article, e.g., riparian uses require no permit, [Cal. Water Code §1201](#) (West 1971), and percolating groundwater is not subject to statutory adjudications, *Id.* §2500.

[FN13]. *Id.* [§1200](#).

[FN14]. See generally Joseph L. Sax, *Review of the Laws Establishing the SWRCB's Permitting Authority Over Appropriations of Groundwater Classified as Subterranean Streams and the SWRCB's Implementation of Those Laws* No. 0-076-300-0 (2002).

[FN15]. The original language read “[w]henver the terms stream, stream system, lake or other body of water or water occurs in this act, such term shall be interpreted to refer only to surface water, and to subterranean streams flowing through known and definite channels.” *Water Commission Act of 1913, ch. 586, § 42, 1913 Cal. Stat. 1012, 1033.*

[FN16]. [City of Los Angeles v. Pomeroy, 57 P. 585 \(Cal. 1899\)](#); [Hooker v. Los Angeles, 188 U.S. 314 \(1903\)](#).

[FN17]. For example, the Department of Water Resources stated that “[t]he appropriate legal test to be applied in distinguishing between percolating water and subterranean streams was set forth by the California Supreme Court in *Los Angeles v. Pomeroy* more than 100 years ago.” *Dep't of Water Res., Statement of the Department of Water Resources at the State Water Resources Control Board Workshop 1 (April 24, 2000)* (transcript on file with the author). “In determining the legal classification of groundwater, the State Board and its predecessors have relied on the California Supreme Court 1899 decision in *Los Angeles versus Pomeroy* which established the distinction between subterranean streams and percolating groundwater.” Erin Mahaney, *Address at State Water Resources Control Board Public Workshop, Subterranean Stream Flowing Through Known and Definite Channels 6 (April 24,*

2000) (transcript on file with the author).

[FN18]. [Cal. Water Code §1200](#) (West 1971). “This article shall not be construed to authorize the board to regulate groundwater in any manner.” [Cal. Water Code §1221 \(West Supp. 2003\)](#). As this provision makes clear, under the California Water Code a “subterranean stream flowing through known and definite channels” is not legally considered “groundwater.” [Cal. Water Code §1200](#) (West 1971).

[FN19]. [Pomeroy, 57 P. at 586.](#)

[FN20]. [Id. at 586-87.](#)

[FN21]. [Id. at 600.](#)

[FN22]. [Id. at 591.](#)

[FN23]. [Id.](#)

[FN24]. [Pomeroy, 57 P. at 586-87.](#)

[FN25]. [Id. at 591.](#)

[FN26]. The court said the surface stream flowed “at the rate of 2 or 3 feet per second,” and the subsurface flow was “14 to 17 miles per [year].” See *id.* This was probably a misstatement. “Pomeroy... estimated... groundwater was flowing... 200 to 250 feet per day.... Groundwater flows a few feet per day.” Dennis E. Williams, Statement at State Water Resources Control Board Public Workshop, Subterranean Stream Flowing Through Known and Definite Channels 57 (April 24, 2000) (transcript on file with author).

[FN27]. [Pomeroy, 57 P. at 592.](#)

[FN28]. In defining underflow, reference is usually made to the elements mentioned in instruction 16 in the Pomeroy decision which stated that groundwater must be connected to the surface stream, flow in the same direction as the surface stream, be confined to a reasonably well-defined space, and be moving in a course. *Id.* at 594.

[FN29]. [Id.](#)

[FN30]. Pomeroy quoted, in its entirety, section 48 from Kinney's first edition. *Id.* at 598 (Clesson S. Kinney, A Treatise on the Law of Irrigation § 48, at 69-70 (W. H. Loudermilk & Co. 1894) [hereinafter Kinney I]). Kinney, a lawyer, pictured the subterranean stream in quite formal and conceptual terms, quite at variance even with the scientific knowledge of his own time, notions which he spelled out at length in his second edition. 2 Clesson S. Kinney, A Treatise on the Law of Irrigation §1161, at 2106-07 (2d ed. Bender-Moss Co. 1912) [hereinafter Kinney II]. He included known and unknown, dependent and independent, subterranean streams. Underflow is the classic example of what he calls a known, dependent subterranean stream. *Id.* at 2106. While what Kinney had primarily in mind were simply the subsurface elements of more-or-less perennial surface streams, according to him, a subterranean stream may also be entirely independent of any surface stream, so long as it ascertainably has the channel-like characteristics of surface streams. Such flows, which Kinney calls “independent [of surface] streams” may be identified by “the topographical features of the country.” *Id.* §1165, at 2117 (citing [McClintock v. Hudson, 74 P. 849, 850 \(Cal. 1903\)](#)).

[FN31]. [Pomeroy, 57 P. at 597.](#) As the issue is sometimes raised whether the legal definition of a subterranean

stream might embrace the whole of California's immense Central Valley or any other broad alluvial valley enclosed by mountains and thus arguably having a bed and banks, the instructions in Pomeroy are striking. Having just described a "watercourse," as above, the trial judge goes on to say that "[w]ater moving by force of gravity in a valley or basin of wide extent... and moving generally through the hole [sic] or through a large portion of the basin... composed of alluvial or other deposit lying throughout the entire basin... do not constitute a watercourse...." Id. at 595. The supreme court underlines this point, noting that the trial judge:

[W]as not giving, or intending to give, a definition which would make the whole San Fernando basin a subterranean stream. The instructions...are applicable...exclusively to the comparatively narrow outlet of the valley... between the rocky and comparatively impervious mountain sides on either hand... [including] water moving in a definite direction...[and] sides and bed to the channel in which it is moving.

Id. at 597. Well before Pomeroy, California court cases had decided to reject integrated management of surface and groundwater, even where knowledge of the hydrological impact was clear and undisputed, [Gould v. Eaton, 44 P. 319, 320 \(Cal. 1896\)](#), and despite a view that such a rule was not required by precedent, and was unwise, S. [Pac. R.R. v. Dufour, 30 P. 783, 784 \(Cal. 1892\)](#). Explicit reference to these precedents in Pomeroy makes clear that the Pomeroy court was not seeking to use the subterranean stream category to bring about integration of surface rights with uses of tributary groundwater.

[FN32]. There seem to be no early cases finding a subterranean stream that involved anything other than underflow. For example, only a few months after the Pomeroy decision, the court held that the subterranean flow in the bed of the San Gabriel River was underflow constituting a subterranean stream, and not percolating water that belonged to the owner of the soil. [Vineland Irrigation Dist. v. Azusa Irrigating Co., 58 P. 1057, 1059-60 \(Cal. 1899\)](#).

[FN33]. [Pomeroy, 57 P. at 598](#) (quoting Kinney I, supra note 30, at 69-70).

[FN34]. Id.

[FN35]. Id. at 597.

[FN36]. Id. at 598.

[FN37]. Id. at 597.

[FN38]. [Pomeroy, 57 P. at 597](#). Despite the common use of the word "impermeability" in discussions of the Pomeroy case rule, neither the instructions, nor the California Supreme Court opinion used that word. The court attributes to the trial court a standard of "a well-defined channel, with impervious sides and banks," though the word "impervious" never appears in the trial court's instructions. Id. (emphasis added). The trial court said only that the sides and banks "may consist of any material which has the effect of confining the waters within circumscribed limits." Id. at 594 (instruction 15). In any event, the court then describes the channel as being the "comparatively impervious mountain sides on either hand." Id. at 597.

[FN39]. See Decision Determining the [Legal Classification of Groundwater in the Pauma & Pala Basins of the San Luis Rey River, 2002 WL 31441222, at *3 \(Cal. State Water Res. Bd. Oct. 17, 2002\)](#) [hereinafter Decision 1645].

[FN40]. [Pomeroy, 57 P. at 595](#).

[FN41]. The conventional cases spoke of those genuine underground flows "in limestone regions," and the courts recognized that "[u]nderground currents of such a description are exceptional in their nature...." [Haldeman v. Bruckhart, 84 Am. Dec. 511, 513 \(Pa. 1863\)](#).

[FN42]. [Katz v. Walkinshaw, 74 P. 766 \(Cal. 1903\)](#).

[FN43]. [Id. at 770.](#)

[FN44]. See [City of San Bernardino v. City of Riverside, 198 P. 784, 787 \(Cal. 1921\).](#)

[FN45]. The English common law rule for groundwater is generally traced back to the 1843 decision in *Acton v. Blundell*. *Acton v. Blundell*, 152 Eng. Rep. 1223, 1235 (Ex. Ch. 1843). *Chasemore v. Richards* recognized a subterranean stream exception to this rule, but the presence of such streams was considered quite exceptional. 1 Engl. Rul. Cas. 729, 754 (Ex. Ch. 1859).

[FN46]. [42 Cal. 303 \(1871\).](#)

[FN47]. The *Hanson* case seems to be the first California decision to use the sort of formulation that appeared in *Pomeroy* and then later showed up in California statutory law. “[A] subterranean stream of a defined character, and flowing in a defined channel.” [Id. at 308.](#) It is perhaps worth noting that in its characterization of subterranean streams, the court in *Hanson* seems to have had in mind something much more like a true river underground. “Underground currents of water... are known to exist in considerable volume, particularly in limestone regions.” *Id.* But “[I]imestone in California is insignificant as a water-bearing formation.” Cal. Dep’t of Water Res., Bulletin No. 118 California’s Ground Water 15 (Sept. 1975). “[D]efinite underground streams are few and of rare occurrence....” 2 Samuel C. Wiel, *Water Rights in the Western States* §1077, at 1011-12 (3d ed. 1911).

[FN48]. [Hanson, 42 Cal. at 309.](#) To be sure, any jurisdiction that had separate legal regimes for groundwater and surface water (even if absolute ownership was not the groundwater rule), had to have some way to draw a line between what was groundwater and what was surface water. It was early recognized that some water, though physically beneath the surface of the earth, was functionally so much part and parcel of the surface stream that it was prudent, not to say essential, to manage it integrally with the surface stream. But, as we shall see, that did not mean one needed the artifice of a “subterranean stream” doctrine such as that fashioned by *Kinney*. See text accompanying note 30.

[FN49]. [Katz v. Walkinshaw, 74 P. 766, 771 \(Cal. 1903\).](#)

[FN50]. [City of Los Angeles v. Pomeroy, 57 P. 585, 594 \(Cal. 1899\).](#)

[FN51]. [74 P. 766 \(Cal. 1903\).](#)

[FN52]. *Id.*

[FN53]. *Id.*

[FN54]. *Id.*

[FN55]. *Id.*

[FN56]. [Katz, 74 P. at 771.](#)

[FN57]. See [id. at 772.](#)

[FN58]. *Id.* Amazingly, people still quote the absolute ownership language that appeared in instruction 12 in *Pomeroy*. See, e.g., Letter from William H. Baber III, Esq., Partner, Minasian, Spruance, Baber, Meith, Soares & Sexton, LLP, to State Water Resources Control Board 2 (April 18, 2000) (on file with the author). They quote the

language despite the supreme court's express disavowal of absolute ownership as the law in [Katz, Katz, 74 P. at 771](#).

[FN59]. [Katz, 74 P. at 770-71;Hanson v. McCue, 42 Cal. 303, 309 \(Cal. 1871\)](#).

[FN60]. [Katz, 74 P. at 766](#).

[FN61]. See [City of Los Angeles v. Hunter, 105 P. 755, 757 \(Cal. 1909\)](#).

[FN62]. [Katz, 74 P. at 766](#).

[FN63]. Id.

[FN64]. [City of Los Angeles v. Pomeroy, 57 P. 585, 593-94 \(Cal. 1899\)](#) (referring to “absolute owners” in instruction 12).

[FN65]. [Katz, 74 P. at 766-67](#).

[FN66]. Lucien Shaw, The Development of the Law of Waters in the West, 10 Cal. L. Rev. 443, 458 (1922).

[FN67]. Id. (exclamation point added).

[FN68]. [Katz, 74 P. at 770](#).

[FN69]. See id.

[FN70]. See id.

[FN71]. Id. at 771.

[FN72]. [McClintock v. Hudson, 74 P. 849, 850-51 \(Cal. 1903\)](#). The court made this statement in response to a claim by a surface riparian user that a neighboring landowner was unlawfully interfering with the plaintiff's right by pumping and taking water offsite for use, because the groundwater being pumped was a “subterranean stream” drawing from the surface stream. [Id. at 849](#).

[FN73]. [Hudson v. Dailey, 105 P. 748, 753 \(Cal. 1909\)](#). The category had not wholly disappeared, it seems. See [Arroyo Ditch & Water Co. v. Baldwin, 100 P. 874, 875 \(Cal. 1909\)](#). The Arroyo Ditch decision's use of the subterranean stream category is at odds with the great weight of California Supreme Court opinions of that era.

[FN74]. [105 P. 755 \(Cal. 1909\)](#). Notably the decision in the Hunter case was written by Justice Frederick W. Henshaw, who participated in both Pomeroy and Katz. [City of Los Angeles v. Pomeroy, 57 P. 585, 605 \(Cal. 1899\); Katz, 74 P. at 773](#).

[FN75]. [Hunter, 105 P. at 756](#).

[FN76]. Id.

[FN77]. Id.

[\[FN78\]](#). *Id.* at 757.

[\[FN79\]](#). *Id.*

[\[FN80\]](#). [Hunter, 105 P. at 757.](#)

[\[FN81\]](#). [City of Los Angeles v. Pomeroy, 57 P. 585, 598 \(Cal. 1899\)](#) (quoting *Kinney I*, supra note 30, § 48, at 69-70).

[\[FN82\]](#). 2 *Kinney II*, supra note 30, § 1188.

[\[FN83\]](#). *Id.* (emphasis added).

[\[FN84\]](#). *Id.* (citations omitted).

[\[FN85\]](#). [142 P.2d 289, 292-93 \(Cal. 1943\).](#)

[\[FN86\]](#). [Id. at 292](#) (citations omitted) (emphasis added).

[\[FN87\]](#). [537 P.2d 1250, 1287-88 \(Cal. 1975\).](#)

[\[FN88\]](#). [Id. at 1288.](#)

[\[FN89\]](#). *Id.*; [City of Los Angeles v. Pomeroy, 57 P. 585, 598 \(Cal. 1899\).](#)

[\[FN90\]](#). See [City of San Fernando, 537 P.2d at 1261, 1286;City of Glendale, 142 P.2d at 292.](#)

[\[FN91\]](#). See [City of San Fernando, 537 P.2d at 1288;City of Glendale, 142 P.2d at 292-93, 297.](#)

[\[FN92\]](#). [City of San Fernando, 537 P.2d at 1261](#) (quoting [City of Glendale, 142 P.2d at 293](#)).

[\[FN93\]](#). *Id.* at 1281 n.23.

[\[FN94\]](#). *Id.* at 1288.

[\[FN95\]](#). *Kinney I*, supra note 30, at 69-70.

[\[FN96\]](#). [City of Los Angeles v. Pomeroy, 57 P. 585, 597 \(Cal. 1899\).](#)

[\[FN97\]](#). [Cal. Civ. Code §§ 1410-1422 \(1908\)](#) (repealed in part 1943).

[\[FN98\]](#). *Id.* § 1419.

[\[FN99\]](#). See *id.* [§§ 1410-1422.](#)

[\[FN100\]](#). See State Conservation Comm'n, 1913 Report of the Conservation Commission of the State of California 31 (1913)[hereinafter *Comm'n First Report*] (transmitted to the Governor and Legislature Jan. 1, 1913).

[FN101]. Act of Apr. 8, 1911, ch. 408, §§ 1 & 3, 1911 Cal. Stat. 822. At the same time the legislature established a State Board of Control (the next year its work was taken over by the State Water Commission), which had authority to accept applications for the use of water for power purposes, and which could grant term licenses for twenty-five years (later extended to forty years). Act of Jan. 2, 1912, ch. 41, § 1, 1912 Cal. Stat. 177; Act of April 8, ch. 406, § 1, 1911 Cal. Stat. 813. See State Conservation Comm'n, 1914 Report of the Conservation Commission of the State of California 7 (1914).

[FN102]. Comm'n First Report, *supra* note 100, at 19-42. No official version of the Commission's legislative recommendation is extant. A version found in the Charles David Marx Papers, at Stanford University, SC 161, Series VIII, Box 1, is undoubtedly the Commission's bill, as explained more fully below. See discussion *infra* text accompanying note 117.

[FN103]. Water Commission Act of 1913, ch. 586, § 45, 1913 Cal. Stat. 1012, 1033.

[FN104]. *Id.*; [Cal. Water Code § 1200 \(West Supp. 2003\)](#).

[FN105]. Elwood Mead, U.S. Dep't of Agric., Report of Irrigation Investigations in California Bulletin No. 100 (1901). Elwood Mead, a pioneer in western water law, was the first state engineer of Wyoming, and later Commissioner of the Federal Bureau of Reclamation. See Comm'n First Report, *supra* note 100, at 35.

[FN106]. See Water Commission Bill, [§§ 2, 9-13](#), 27 (proposed to the General Assembly by the California Conservation Commission in 1913) [hereinafter Water Commission Bill]. There was some odd lack of parallelism. While the bill required registration of proposed riparian uses and abolished unused surface riparian rights after four years of nonuse, no such limitations were imposed on overlying uses of groundwater. See *id.*

[FN107]. *Id.* [§§ 2, 8-12](#).

[FN108]. *Id.* [§§ 13](#), 27.

[FN109]. *Id.* § 17.

[FN110]. Samuel Wiel, a prominent San Francisco attorney and writer on water law, was in active consultation with the Commission, and had suggested, unsuccessfully, a “consolidated” system. Wiel says that his “suggestions were not acted upon by the Commission and form no part of the bill presented to the legislature, nor of the statute passed.” Samuel C. Wiel, A Short Code of Underground Waters, 2 Cal. L. Rev. 25, 25 (1914). Wiel's notion was that “[a] definite body of water upon the surface, and the underground water proximately connected therewith in natural occurrence, constitute a consolidated underground and surface water-supply” and that rights should “extend to the whole and every part of a consolidated surface and underground water-supply...without distinction between the surface part and the underground part.” *Id.* at 26.

[FN111]. Water Commission Bill, *supra* note 106, [§ 8](#).

[FN112]. It is not clear what exactly the differences in result would have been, since, in general, the bill sought to integrate the two sources, but it seemed to have anticipated at least one difference: Under section 17 of the bill, groundwater appropriators making off-tract uses were made subordinate to surface-stream riparians whose supply their appropriations diminish. *Id.* § 17. However, there was nothing in the bill that made surface-stream appropriators subordinate to overlying on-tract users of groundwater when the surface-stream appropriations diminish their supply, though groundwater appropriators appear to be thus subordinated under section 15(a). *Id.*

§15(a).

[\[FN113\]](#). *Id.* [§ 8](#).

[\[FN114\]](#). Hearing on Proposed Water Commission Bill Before the California State Water Commission, 8-13 (May 28, 1912) [hereinafter Hearing]. Stenographic transcripts of these hearings were found in Oakland in the Pardee Home Museum Papers, Water Conservation, Box 29 (copies of the transcripts are on file with the author). The cast of characters in the hearings is as follows: Pardee was the chair of the Conservation Commission, and, as noted above, Francis Cuttle and J.P. Baumgartner were the other two Commission Members. E.E. Keech was a lawyer practicing in Santa Ana, who represented water users in San Bernardino, Riverside, and Los Angeles Counties. Samuel Wiel, as noted above, was a very prominent San Francisco lawyer and a prolific writer on water law. Frank H. Short of Fresno was a prominent water lawyer who represented Central Valley agricultural interests. Mr. Tait was probably C.E. Tait, who was senior irrigation engineer, in the office of public roads and rural engineering, at the United States Department of Agriculture. He was a member of a commission that issued a report on the utilization of the Mojave River for irrigation in Victor Valley in 1917. I have not been able to identify Mr. Lane. He might have been Franklin K. Lane, who was Secretary of the Interior in President Wilson's Cabinet, and previously a water lawyer in San Francisco. However, Lane was a member of the Interstate Commerce Commission, and in Washington, D.C. from 1905-1913, when he became Interior Secretary.

[\[FN115\]](#). *Id.* at 12. As described in *supra* note 110, Wiel personally opposed drawing any distinction between ground and surface water, though that was never the position of the Commission. In this same colloquy Wiel said:

I would not make any distinction between stream flow and underground water, make no distinction whatever, but take water supply. If water supply is partially underground and partially on the surface, there is no reason why people should not enjoy it whether underground [or] in the stream. There should be a right in the supply regardless of whether underground or surface.

Id. at 12-13. Mr. Keech replied that such a proposal “is a departure from this Bill and is a radical construction.” *Id.* at 13.

[\[FN116\]](#). The usual source for this belief is an 1850 Connecticut case, in which the court said groundwater influences “are so secret, changeable and uncontrollable [sic], we cannot subject them to the regulations of law, nor build upon them a system of rules, as has been done with streams upon the surface.” *Roath v. Driscoll*, 20 Conn. 532, 540 (1850).

[\[FN117\]](#). Compare Water Commission Bill, *supra* note 106, with A.B. 642, 40th Leg., Reg. Sess. (Cal. 1913).

[\[FN118\]](#). The existence of these materials was unknown until they were discovered in the course of preparing the report from which this article is drawn. The original legislative drafts were discovered in the archives of the Pardee Home Museum in Oakland, California, and the transcript of the hearings on them in the Charles David Marx Papers in the Stanford University Library. Copies of the legislative drafts and transcripts of the hearings are on file with the author.

[\[FN119\]](#). See generally A.E. Chandler, The “Water Bill” Proposed by the Conservation Commission of California, 1 Cal. L. Rev. 148, 161-68 (1913).

[\[FN120\]](#). Compare *id.*, with A.B. 642.

[\[FN121\]](#). Undated unsigned typescript author identified among Governor Pardee's papers (on file with the author).

[\[FN122\]](#). *Id.* Franklin Hichborn, while covering the legislature for the Sacramento Bee, stated “Francis Cuttle... had much to do with the framing of the measure.” Franklin Hichborn, *Story of the Session of the California Legislature of 1913*, at 153 (1913).

[FN123]. A.B. 642. Johnstone became Chair of the State Water Commission in 1915, succeeding Professor Charles David Marx of Stanford University. Johnstone and Pardee knew each other, and some correspondence between them (though not on this subject) is among the Pardee papers.

[FN124]. See Wiel, *supra* note 110, at 25.

[FN125]. The bill never mentions groundwater, underground water, or subsurface water in any form. It is simply implicitly incorporated in the overall definition of water.

[FN126]. A.B. 642 §§ 1, 15-16. In what is probably an unintended omission, it does not explicitly recognize overlying on-tract uses of groundwater, the analogue of riparian rights on a stream.

[FN127]. *Id.* §§11, 34.

[FN128]. See Hearing, *supra* note 114, at 8-13.

[FN129]. A.B. 642 § 42.

[FN130]. April 2 Amendment to A.B. 642, 40th Leg. Sess. (Cal. 1913), reprinted in 1913 Assem. J. 1116, 1128, § 42 (Cal. Apr. 2, 1913).

[FN131]. See Hichborn, *supra* note 122, at 150 (noting that amendments proposed by the Conservation Committee were adopted “without difficulty”).

[FN132]. One bit of evidence in support of the view that the concern was about the scope of state authority is that when this amendment was adopted, the title of the bill was also changed. A sentence was added to the beginning of the title saying “to regulate the use of water which is subject to such control by the State of California, and in that behalf.” Apr. 2 Amendment to A.B. 642 at amend. 1, 1116.

[FN133]. See Hearing, *supra* note 114, at 17. During the hearing Governor Pardee suggested the following change: “Owners of overlying land shall have the right to use such underground water on such overlying land only, and such use shall be for useful and beneficial purposes only,... provided such use is for domestic purposes only.” *Id.*

[FN134]. Water Commission Bill, *supra* note 106, § 11.

[FN135]. *Id.* § 13.

[FN136]. *Id.* § 27.

[FN137]. [74 P. 766, 771 \(Cal. 1903\)](#).

[FN138]. See generally Hearing, *supra* note 114, at 17-29.

[FN139]. *Id.* at 18.

[FN140]. *Id.* at 19.

[FN141]. *Id.* at 21-22, 26-29. While no documentation of Short as a draftsman has been found, Short did write a letter to the Commission several months after the hearings, in which he again indicated his concern about the underground water provisions:

What I especially wish to impress, however, is that there appears to be no sufficient or controlling reason for attempting to change the laws with respect to subterranean or underground waters at all, as at present decided, it is perfectly well understood, clearly definite and sufficient for all purposes... and I wholly fail to see that anything further is desirable. I have given this subject considerable thought and study since the proceedings before the Commission, and I am more than ever convinced that the proposed legislation as to underground waters, except in so far as it relates merely to the exercise of public authority thereover, should be entirely eliminated as wholly unnecessary and hurtful.

Letter from Frank Short, Lawyer, to State Water Commission, at 4-5 (July 18, 1912) (on file with the author). Mr. Short had elsewhere distinguished authority to regulate to protect others' rights, for example, versus discretionary permitting to determine whether water could be taken at all.

[FN142]. Short's view drew on language that percolating water belongs to the owner of the soil, common in cases decided when absolute ownership was still thought to be the rule in California. See [Gould v. Eaton](#), 44 P. 319, 320 (Cal. 1896). It appears to have been taken as authoritative, despite the decision in *Katz*, and even though in 1911 (two years previously) California amended [section 1410](#) of the Civil Code to read “[a]ll water or the use of water within the State of California is the property of the people of the State of California....” Act of April 8, 1911, ch. 407, § 1, 1911 Cal. Stat. 821. See [Cal. Water Code § 102](#) (West 1971).

[FN143]. They certainly knew the recent decision in *Hudson* in which that very issue arose. [Hudson v. Dailey](#), 105 P. 748, 753 (Cal. 1909).

[FN144]. April 2 Amendment to A.B. 642, 40th Leg. Sess. (Cal. 1913), reprinted in 1913 Assem. J. 1116, 1128, § 42 (Cal. Apr. 2, 1913). The amendment read: “Whenever the terms stream, stream system, lake or other body of water occurs in this Act, such term shall be interpreted to refer only to surface water.” *Id.*

[FN145]. *Hichborn*, *supra* note 122, at 150. See also 1913 Assem. J. 1116, 2336 (Cal. Apr. 30, 1913) (statement of Assemblyman Brown regarding the April 30th Amendment to A.B. 642).

[FN146]. While section 15 of the water bill, as introduced, gave the commission discretion, the enacted version omitted discretion even over surface water appropriations. Compare “The... commission may in its discretion allow... the appropriation of unappropriated water...,” A.B. 642, 40th Leg., Reg. Sess. § 15 (Cal. 1913), with “The... commission shall allow... the appropriation of unappropriated water.” Water Commission Act of 1913, ch. 586, §42, 1913 Cal. Stat. 1012, 1033.

[FN147]. Since a version of the language that appears today as Water Code [§102](#) had been enacted in 1911, Short may have been pressing the point a bit far even back then. Compare Act of Apr. 8., 1911, ch. 407, § 1, 1911 Cal. Stat. 821, with [Cal. Water Code §102](#) (West 1971).

[FN148]. An extensive reading of contemporary newspaper accounts in the *Fresno Republican*, *Oakland Enquirer*, *Sacramento Bee*, *San Francisco Daily News*, and *San Francisco Call* has turned up no indication of any controversy over changes in the bill regarding groundwater coverage. For example, the *Oakland Enquirer* stated in one of its articles:

[t]here was a preliminary hearing given to the elaborate measure in the Assembly a few days ago, but there was a continuance of the subject granted for the purpose of making changes which were considered advisable. The committee worked Saturday as also last night on the subject, with the result that it was the opinion of some of the assemblymen who had opposed certain features when the bill was before the Assembly [that] the measure had been strengthened in a satisfactory manner and that a number of the features which had not appealed favorably to some of the members of the lower house had been so rewritten as to satisfy the most insistent of the critics. The amendments were ordered printed and the measure, as amended, will come up for passage in a few days.

Conservation Bill Amended and Strengthened: Brown Amendment to Johnstone Measure Discussed, *Oakland Enquirer*, Apr. 21, 1913, at 6. Similarly, another article states “the amendments proposed yesterday... were of a minor character, none of them touching any of the main features of the proposed enactment.” Edward A. O’Brien, *Considering New Conservation Features: Assembly Talks up the Amendments to Measure*, *Oakland Enquirer*, Apr. 22, 1913, at 3. Of course the bill was still too strong for its opponents. See generally *Water Bill Held Back by Argument*, *Oakland Enquirer*, Apr. 29, 1913, at 1; *Proposed Supervision of all State Water Rights by Commission*, Editorial, *Oakland Enquirer*, Apr. 29, 1913, at 19.

[FN149]. The legal concern expressed was limited to discretionary permitting authority, see *supra* text following note 140. The legislative result, however, was to deny any permitting jurisdiction at all over (percolating) groundwater. See *Water Commission Act of 1913*, ch. 586, § 11, 1913 Cal. Stat. 1012, 1018, and that is still the law; see [Cal. Water Code § 1200](#) (West 1971).

[FN150]. April 30 Amendment to A.B. 642, 40th Leg. Sess. (Cal. 1913), reprinted in 1913 *Assem. J.* 2336 (Cal. Apr. 30, 1913) (emphasis added). Though the language was offered by Assemblyman Henry Ward Brown of San Mateo, an opponent of the bill, it appears to have generated no objection, either by proponents or opponents. Brown was a lawyer and a graduate of Hastings College of the Law.

[FN151]. [City of Los Angeles v. Pomeroy, 57 P. 585, 598 \(Cal. 1899\)](#).

[FN152]. See *Water Commission Act of 1913*, ch. 586, § 11, 1913 Cal. Stat. 1012, 1018.

[FN153]. [Cal. Water Code § 1200](#) (West 1971).

[FN154]. See generally *Comm'n First Report*, *supra* note 100 (lacking this language).

[FN155]. See generally *Water Commission Bill*, *supra* note 106.

[FN156]. See generally *Hearing*, *supra* note 114 (lacking this language).

[FN157]. See generally A.B. 642, 40th Leg., Reg. Sess. § 11 (Cal. 1913) (lacking this language).

[FN158]. See generally *Hearing*, *supra* note 114 (discussing ramifications of the proposed bill on underground water).

[FN159]. See *id.* at 8-9.

[FN160]. See *Water Commission Act of 1913*, ch. 586, § 11, 1913 Cal. Stat. 1012, 1018.

[FN161]. See *Hichborn*, *supra* note 122, at 137-73 (Containing a highly opinionated discussion of the controversy over the bill, but dealing almost exclusively with the maneuvering of various factions, rather than with the specifics of the amendment process). There were two legislative meetings on the bill. *Id.* at 145, 165. No transcript or other record of them has been found. But see *Franklin Hichborn, Heney Backs the Water Bill: Conservation Measure Made Subject of Debate Before Senate and Assembly Committees*, *Sacramento Bee*, Mar. 19, 1913, at 1 (describing the first meeting, held on March 18, 1913). A letter from W.A. Johnstone, Assemblyman, to Governor Pardee, dated April 4, 1914, gives the final votes on the bill and a brief discussion of two proposed Senate amendments (not dealing with groundwater), commenting “[t]hese are interesting to indicate hidden influences in the consideration of the measure.” Letter from W.A. Johnstone, Assemblyman, to George Pardee, California Governor (April 4, 1914) (on file with the author).

[FN162]. [City of Los Angeles v. Hunter](#), 105 P. 755, 757 (Cal. 1909); [Hudson v. Dailey](#), 105 P. 748, 753 (Cal. 1909); [McClintock v. Hudson](#), 74 P. 849, 850-51 (Cal. 1903); [Katz v. Walkinshaw](#), 74 P. 766, 770-71 (Cal. 1903); [Hanson v. McHue](#), 42 Cal. 303, 309 (1871).

[FN163]. See Office of Sec'y of State, Amendments to Constitution and Proposed Statutes with Arguments Respecting the Same, to be Submitted to the Electors of the State of California at the General Election on Tuesday, November 3, 1914 (1914).

[FN164]. Water Commission Act of 1913, ch. 586, § 42, 1913 Cal. Stat. 1012, 1033; [City of Los Angeles v. Pomeroy](#), 57 P. 585, 598 (Cal. 1899).

[FN165]. [Hunter](#), 105 P. at 757; [Hudson](#), 105 P. at 753; [McClintock](#), 74 P. at 850-51; [Katz](#), 74 P. at 770-71; [Hanson](#), 42 Cal. at 309.

[FN166]. Hearing, *supra* note 114, at 8-9.

[FN167]. *Id.* at 12.

[FN168]. Cal. Dep't of Water Res., *supra* note 47, at 15.

[FN169]. [Cal. Const., art. X, § 2](#); [Herminghaus v. S. Cal. Edison Co.](#), 252 P. 607, 622 (Cal. 1926).

[FN170]. [Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist.](#), 45 P.2d 972, 989 (Cal. 1935).

[FN171]. See [Rowland v. Ramelli](#), 599 P.2d 656, 669 (Cal. 1979).

[FN172]. Hichborn, *supra* note 122, at tbl.II.

[FN173]. *Id.* at tbl.I.

[FN174]. *Id.* at tbl.II.

[FN175]. Water Commission Act of 1913, ch. 586, 1913 Cal. Stat. 1012.

[FN176]. March Fong Eu, Office of the Sec'y of State, A Study of Ballot Measures: 1884-1986.

[FN177]. State Water Problems Conference, Report 65 (1916). The report said

[t]he conference therefore has recommended legislation which will recognize the doctrine of prior appropriation as applied to underground water, so that the one who first develops it shall be entitled to so much water as is necessary for the beneficial use of the project to which it is applied.

....

... [T]he appropriation of underground water, like the appropriation of surface water, should be placed under the control of the State Water Commission, but... no owner of land of 160 acres or less, should be compelled to apply to the Water Commission for permission to develop the water lying under his own land for use upon that land....

Id. at 65-66.

[FN178]. State Conservation Comm'n, 1917 Report of the Conservation Commission of the State of California 74 (1917).

[FN179]. Cal. Dep't of Water Res., Bulletin No. 3, The California Water Plan 221 (1957).

[FN180]. [Cal. Water Code §5000\(c\)](#) (West 1971); Carley V. Porter, What's in the Legislative Cards for Ground Water, in Proc. of the Eighth Biennial Conference on Ground Water 63, 65-66 (1971).

[FN181]. Ronald B. Robie, Carley V. Porter Memorial Luncheon Address, in Proc. of the Ninth Biennial Conference on Ground Water 137, 146 (Frank T. Bragg ed., 1973).

[FN182]. Anne J. Schneider, Governor's Comm'n to Review Cal. Water Rights Law, Groundwater Rights in Cal., Background and Issues 96 (1977).

[FN183]. Governor's Commission to Review Cal. Water Rights Law, Final Report 166 (1978).

[FN184]. *Id.* at 166-67.

[FN185]. *Id.* at 167.

[FN186]. Kevin M. O'Brien, The Governor's Commission Revisited: Ten Years of Not So Benign Neglect in California Ground Water Law, in Proc. of the Sixteenth Biennial Conference on Ground Water 50 (Johannes J. DeVries ed., 1988) (citations omitted).

[FN187]. A useful, succinct review of legislative activity appears in Anne J. Schneider, Groundwater Management Options - Vision vs. Reality, Remarks at Forum Sponsored by the San Francisco Estuary Project, the Water Education Foundation, the Commonwealth Club of California and Friends of the San Francisco Estuary (Nov. 2, 1999), in *Water Rights, Water Wrongs: Learning From the Past, Looking to the Future* 41-46.

[FN188]. Compare Water Commission Act of 1913, ch. 586, § 11, 1913 Cal. Stat. 1012, 1018, with [Cal. Water Code §1200](#) (West 1971).

[FN189]. Assem. Interim Comm. on Water to the Cal. Legislature, Ground Water Problems in California, 26 Assem. Interim Comm. Rep. 8 (1962).

[FN190]. *Id.* at 46.

[FN191]. [Cal. Water Code §§1215, 1216](#) (West Supp. 2003).

[FN192]. *Id.* [§1221](#).

[FN193]. [Cal. Water Code §2500](#) (West 1971).

[FN194]. [Cal. Water Code §2500.5](#) (West Supp. 2003).

[FN195]. Cal. Water Res. Control Bd., Report of Investigation Pursuant to Petition for Adjudication, Scott River, Siskiyou County 5-6 (1971).

[P]umping of groundwater as well as underflow reduces the surface flow of the various streams and the main stem of Scott River.... It became apparent... that underground water was an important part of the water supply problem in the stream system and that in order to properly determine the rights to water from the stream system, interconnected underground water should be included.

Id. See also Cal. Water Res. Control Bd., Report on Hydrogeologic Conditions, Scott River Valley, at ii (1975).

[FN196]. [Cal. Water Code §2100](#) (West 1971).

[FN197]. [Id.](#) §2101(b).

[FN198]. [Id.](#) §5000(a); see also Cal. Water Code §1005.4 (West Supp. 2003). Section 12922 of the Water Code expresses the public interest in protecting groundwater basins from critical conditions of overdraft depletion, sea water intrusion, or degraded water quality, but it is just a declaration of the public interest, not a grant of jurisdiction to the Board. [Cal. Water Code §12922](#) (West 1992).

[FN199]. [Cal. Water Code §§10750-10756 \(West Supp. 2003\)](#); Assem. Interim Comm. on Water, *supra* note 189, at 47-48.

[FN200]. Basing jurisdiction on impact, in light of modern pumping capacity, would expand the Board's authority beyond its traditional extent. That would raise the question of how to deal with longstanding unregulated uses, unless they were grandfathered.

[FN201]. For example, both Colorado and New Mexico use a time-based maximum interference test to identify wells that are sufficiently remote in impact that they do not need to be actively administered in the prior appropriation system. See also [Hubbard v. Wash. Dep't of Ecology](#), 936 P.2d 27, 28 (Wash. 1997).

[FN202]. The Arizona Supreme Court took the same view of a similar interpretative question under its groundwater law. [In re Gen. Adjudication of the Gila River Sys.](#), 857 P.2d 1236, 1245 (Ariz. 1993).

[FN203]. A 1999 State Water Resources Control Board decision illustrates a contemporary case in which the Board determines whether a subterranean stream is present. [In re Application 29664, Decision 1639, 1999 WL 458786, at *1 to *13](#) (Cal. State Water Res. Control Bd. June 17, 1999). A 1926 decision is typical of older cases. *In re Application No. 3883, Decision D. 119, at 7-14* (Cal. Div. Of Water Rights, Aug. 24, 1926). Although a recent Board decision holds to the traditional Pomeroy approach, a recent draft order has a somewhat more generous interpretive stance. Compare Decision 1645, *supra* note 39, at *1 to *4, with *In re Permit 14853, Draft Order WRO 2003, at 10-13* (Cal. State Water Res. Control Bd. Nov. 27, 2002) [hereinafter SWRCB Draft Order].

[FN204]. See *supra* text accompanying notes 31-40.

[FN205]. [Andrus v. Charlestone Stone Prods. Co.](#), 436 U.S. 604, 605-06 (1978).

[FN206]. [Id.](#) at 614.

[FN207]. “An overlying right, [is] analogous to that of the riparian owner in a surface stream.” [Barstow v. Mojave Water Agency](#), 5 P.3d 853, 863 (Cal. 2000). See also [Prather v. Hoberg](#), 150 P.2d 405, 410 (Cal. 1944); Wells A. Hutchins, *The California Law of Water Rights* 421 (1956). All the usual limits on riparian diversion and use presumably apply to subterranean stream riparians as to those riparian to a surface stream--use is limited to natural flows, must be within the watershed, and no seasonal storage is permitted. As to the extent of overlying rights, it is “the owner's right to take water from the ground underneath for use on his land within the basin or watershed.” [Barstow](#), 5 P.3d at 863.

[FN208]. See [In re Amended Application 27614, Decision 1632, 1995 WL 464946, at *12 to *14](#) (Cal. State Water Res. Control Bd. July 6, 1995) [hereinafter Decision 1632]. Riparian pumpers of percolating groundwater do not have to file the statements of diversion and use to which surface riparians are subject. [Cal. Water Code §5101 \(West Supp. 2003\)](#). See the definition of diversion. [Id.](#) §5100(b) (West 1971).

[FN209]. Letter from Stephen K. Hall, Exec. Dir., ACWA, to Joseph Sax, Professor of Law 1 (Oct. 31, 2001) (on file with the author).

[FN210]. While the question here relates to users of percolating groundwater, a parallel question arises as to riparian surface water users, and pre-1914 appropriators.

[FN211]. Cf. [in re Water Use Permit Applications](#), 9 P.3d 409, 447 (Haw. 2000) (Waiahole Ditch case) (extending public trust to groundwater). An unresolved question in California is whether pumping of tributary groundwater that affects public trust values in navigable waters would be treated like tributary surface water under [Nat'l Audubon Soc'y v. Superior Court](#), 658 P.2d 709, 712, 721 (Cal. 1983).

[FN212]. The scope of the Board's public trust authority is a subject of considerable dispute. See, e.g., David R.E. Aladjem, *Is Water Ripe for the Taking? The SWRCB's Lower Yuba River Decision and the Public Trust Doctrine*, 11 Cal. Water L. & Pol'y Rep. 261-65 (July 2001) (criticizing [In re Fishery Res. & Water Right Issues of the Lower Yuba River, Decision 1644, 2001 WL 1880742 \(Cal. State Water Res. Bd. March 1, 2001\)](#)) (petitions for reconsideration and petitions for writ of administrative mandamus pending). See generally Gregory S. Weber, [Articulating the Public Trust: Text, Near-Text and Context](#), 27 Ariz. St. L.J. 1155, 1173 (1995).

[FN213]. See [Env'tl. Def. Fund v. E. Bay Mun. Util. Dist.](#), 605 P.2d 1, 10 (Cal. 1980) [hereinafter EDF II]; [State Water Res. Control Bd. v. Forni](#), 126 Cal. Rptr. 851, 858 (Cal. Ct. App. 1976). Courts may require the parties to accept a physical solution to resolve a waste problem. [City of Lodi v. E. Bay Mun. Util. Dist.](#), 60 P.2d 439, 450 (Cal. 1936).

[FN214]. [Cal. Water Code §275 \(West Supp. 2003\)](#). Also the Attorney General can bring an action for equitable relief “for the protection of the natural resources of the state from pollution, impairment, or destruction.” [Cal. Gov't Code §12607](#) (West 1992). For definition of “natural resources” see id. §12605.

[FN215]. [Forni](#), 126 Cal. Rptr. at 851-58 (discussing Board suit brought under [section 275](#) of the Water Code to enjoin riparian uses as unreasonable). The prohibition on unreasonable and non-beneficial use applies to groundwater as well as surface water use. [Joslin v. Marin Mun. Water Dist.](#), 429 P.2d 889, 893 (Cal. 1967); [Peabody v. City of Vallejo](#), 40 P.2d 486, 494 (Cal. 1935).

[FN216]. “Members of the public” have standing to bring an action to restrain violations of the public trust. [Marks v. Whitney](#), 491 P.2d 374, 381 (Cal. 1971); see also Cal. [State Water Res. Control Bd. v. United States](#), 749 P.2d 324, 338 n.16 (Cal. 1988). The State acting through the Board has a continuing responsibility and authority under the public trust doctrine to consider the effect of water diversions upon public trust resources and to avoid or minimize harm to those resources to the extent feasible. [Nat'l Audubon Soc'y](#), 658 P.2d at 723 (finding a duty of continuing supervision). Preservation and enhancement of fish and wildlife resources, and recreation, as well as the public interest in water, are statutory responsibilities of the Board. [Cal. Water Code §§1243, 1253](#) (West 1971).

[FN217]. See generally Plaintiff's Complaint, *Ctr. for Biological Diversity v. Smith*, No. CV2002-000171 (Ariz. Super. Ct. Maricopa County filed on Jan. 7, 2002). The court later consolidated this case with others in *Home Builders Ass'n of Cent. Ariz. v. Katz*, CA-SA-02-0168, 1 CA-SA 02-0177, 1 CA-SA 02-0178, but the Arizona Supreme Court denied certiorari on March 21, 2003.

[FN218]. It may be important to distinguish the Board's ability to go to court from its ability to assert jurisdiction itself, and to issue orders restraining groundwater use. Sometimes the term “jurisdiction” is used without making this distinction explicit. See, e.g., Barton H. Thompson, Jr., *Legal Disconnections Between Surface Water and Ground Water*, in *Making the Connections: Proceedings of the Twentieth Biennial Conference on Ground Water 21*

(Johannes DeVries & Jeff Woled eds., 1996).

[FN219]. Cal. [State Water Res. Control Bd., 749 P.2d at 338 n.16.](#)

[FN220]. “The department [and board] shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this State.” [Cal. Water Code § 275](#) (West 1971).

[FN221]. “The Legislature hereby finds and declares that in order to provide for the orderly and efficient administration of the water resources of the state it is necessary to establish a control board which shall exercise the adjudicatory and regulatory functions of the state in the field of water resources.” *Id.* §174; see also *id.* §§ 104, 105.

[FN222]. [Imperial Irrigation Dist. v. State Water Res. Control Bd., 275 Cal. Rptr. 250 \(Cal. Ct. App. 1990\)](#) [hereinafter IID II].

[FN223]. [Id. at 255-56.](#)

[FN224]. “[I]n any lawsuit for a determination of rights to water, ‘the court may order a reference to the Board, as referee, of any or all issues,’ or, alternatively, ‘may refer the suit to the board for investigation of and report upon any or all of the physical facts involved.’” Cal. [State Water Res. Control Bd., 749 P.2d at 338 n.16](#) (citations omitted).

[FN225]. IID II, [275 Cal. Rptr. at 264 n.4.](#)

[FN226]. [Envtl. Def. Fund v. E. Bay Mun. Util. Dist., 572 P.2d 1128, 1136-37 \(Cal. 1978\)](#) [hereinafter EDF I]. See also [Envtl. Def. Fund v. E. Bay Mun. Util. Dist., 605 P.2d 1, 10 \(Cal. 1980\)](#) [hereinafter EDF II].

[FN227]. The EDF II case, where the court held the Board has jurisdiction to determine whether a water user's failure to reclaim water violated the Water Reclamation Law, dealt not only with the use of water held under a Board permit, but with a statute that expressly granted the Board jurisdiction to regulate reclamation and use of waste water. Such cases essentially raise primary jurisdiction, or concurrent jurisdiction, issues, rather than dealing with the question whether there is Board jurisdiction at all. The Board and the courts have concurrent jurisdiction. EDF II, [605 P.2d at 10.](#)

[FN228]. [Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 723, 728-29 \(Cal. 1983\)](#); [In re Applications No. 29919, Decision 1635, 1996 WL 904701, at *12 to *13 \(Cal. State Water Res. Bd. Oct. 2, 1996\).](#)

[FN229]. [Imperial Irrigation Dist. v. State Water Res. Control Bd., 231 Cal. Rptr. 283, 289 \(Cal. Ct. App. 1987\)](#) (citing [EDF I, 572 P.2d at 1136](#)) [hereinafter IID I].

[FN230]. [United States v. State Water Res. Control Bd., 227 Cal. Rptr. 161, 195 \(Cal. Ct. App. 1986\)](#). While there is language in the Racanelli decision that is very broad--the court says the Board has independent jurisdiction to implement the Constitutional provision against unreasonable use--this statement was made in the context of a party holding a Board permit, and the Board was only amending the permit terms. [Id. at 187.](#) It did not seek to use an unreasonable use claim to create jurisdiction where it did not otherwise exist.

[FN231]. IID I, [231 Cal. Rptr. at 289](#) (quoting [State Water Res. Control Bd., 227 Cal. Rptr. at 195.](#))

[FN232]. *Id.*

[FN233]. It should be noted that the Board's limited ability to gather information or perform monitoring, or to require diverters to report and monitor, significantly constrains its practical capacity to implement [section 275](#) of the Water Code and the public trust. Broad substantive authority may be undermined by its inability to obtain sufficient evidence to sustain a claim. See Cal. Water Code § 1051 (West 1971).

[FN234]. See, e.g., Cal. Water Code [§§ 1005.4, 1215, 1216, 2500.5](#) (West 2003); id. [§ 12922](#) (West 1992); id. [§§ 2100, 2101\(b\), 2500, 5000\(a\)](#) (West 1971).

[FN235]. Cf. Hearing, *supra* note 114, at 21, 25-26.

[FN236]. See [Katz v. Walkinshaw, 74 P. 766, 771-72 \(Cal. 1903\)](#) (declaring the doctrine of correlative rights to govern groundwater pumping in California); Water Commission Bill, *supra* note 106, [§§ 13, 15, 17](#).

[FN237]. Plaintiff's Complaint, *N. Gualala Water Co. v. State Water Res. Control Bd.*, No. SCUK CVG 01 86 109 (Super. Ct. Cal. Mendocino County filed July 19, 2001). The case has a complicated history. See [In re Permit 14853, Order WR 2001-14, 2001 WL 1880726 \(Cal. State Water Res. Control Bd. June 21, 2001\)](#) [hereinafter Order 2001-14]; [In re Petitions for Reconsideration by Coast Action Group, Order WR 99-011, 1999 WL 1333373 \(Cal. State Water Res. Control Bd. Nov. 18, 1999\)](#) [hereinafter Order 99-011]; [In re Minor Protested Petition to Change Permits 5431, Order WR 99-09-DWR, 1999 WL 33512265 \(Cal. State Water Res. Control Bd. Aug. 27, 1999\)](#). On June 21, 2001, the Board issued an Order Denying Reconsideration in the North Gualala Water Company case. Order 2001-14, *supra*, at *7. The Order deals with the procedural failings of the petition for reconsideration. But the Order notes the Company claims its pumping is not affecting the surface flow, as well as that it is not pumping from a subterranean stream. Id. at *4. If there is no hydraulic connection between the pumping and the surface flows, then the case would become moot (there would be no need to apply stream flow maintenance standards to these wells). Id. at *5. If, however, there is a connection, and if it is determined that the Company is not pumping from a subterranean stream--an issue that the June 21 Order leaves open for later consideration-- the question remains whether, and how, the Board would seek to control the pumping in order to protect instream flows. Id. at *7. As of the time of this writing, a new draft order had been issued by the Board finding that the water is a subterranean stream. SWRCB Draft Order, *supra* note 203.

[FN238]. *N. Gualala Water Co.*, No. SCUK CVG 01 86 109, at 4.

[FN239]. Order 2001-14, *supra* note 237, at *4.

[FN240]. The Board's order states the following:

Under [article X, section 2 of the California Constitution](#) and Water Code [section 100](#), however, all diversion and use of water in California is subject to reasonable use restrictions and a prohibition on unreasonable diversion or method of diversion. Adverse impacts to fish and wildlife are among the factors that provide a basis for determining that a water diversion may be unreasonable. Water Code [section 275](#) directs the SWRCB to take all appropriate actions to prevent waste or unreasonable use and unreasonable methods of diversion. The SWRCB's authority to regulate water use to comply with the reasonable use and diversion requirements of the California Constitution and Water Code extends to water use under all types of rights. Thus, the SWRCB's authority to require the operator of a well to prepare a water supply contingency plan to avoid or reduce impacts on public trust resources is not limited to situations where the well is deemed to be under the SWRCB's permitting authority. Order 99-011, *supra* note 237, at *4 n.3 (citations omitted). Elsewhere in the Order, the Board says it "has the continuing responsibility and authority under the public trust doctrine to consider the effect of water diversions upon public trust resources and to avoid or minimize harm to those resources to the extent feasible." Id. at *4 (citing [Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 726-28 \(Cal. 1983\)](#)). It should be noted, incidentally, that since salmon in the river were listed under the federal Endangered Species Act, the pumpers might have been liable for a

“take” under that law, whether or not the Board had jurisdiction over them. [16 U.S.C. §1538\(a\)\(1\)\(B\) \(2000\)](#). [\[FN241\]](#). N. Gualala Water Co., No. SCUk CVG 01 86 109, at *8.

[\[FN242\]](#). SWRCB Draft Order, *supra* note 203, at 3.

[\[FN243\]](#). [Eckel v. Springfield Tunnel & Dev. Co.](#), 262 P. 425, 428 (Cal. Dist. Ct. App. 1927); [McClintock v. Hudson](#), 74 P. 849, 850-51 (Cal. 1903). [Miller v. Bay Cities Water Co.](#), 107 P. 115, 125 (Cal. 1910), cited in [City of Lodi v. E. Bay. Mun. Util. Dist.](#), 60 P.2d 439, 449 (Cal. 1936).

[\[FN244\]](#). 76 P. 47, 48-49 (Cal. 1904). The court's legal posture in this case is not entirely clear, as it does not describe the defendant (pumper of percolating groundwater used off the overlying land) as simply an appropriator, junior to the plaintiff (surface stream appropriator), but says that a use other than on the pumper's own land is “not for a reasonable use” *Id.*

[\[FN245\]](#). 60 P.2d at 440, 447, 452.

[\[FN246\]](#). [McClintock](#), 74 P. at 849, 851.

[\[FN247\]](#). [City of Los Angeles v. Hunter](#), 105 P. 755, 757 (Cal. 1909).

[\[FN248\]](#). [Hudson v. Dailey](#), 105 P. 748, 752-53 (Cal. 1909). The court made clear that correlative rights would apply whether the groundwater was percolating or was a subterranean stream. [Id.](#) at 753. The Eckel court followed this holding. [Eckel](#), 262 P. at 427.

[\[FN249\]](#). See [United States v. Fallbrook Pub. Util. Dist.](#), 165 F. Supp. 806, 847 (S.D. Cal. 1958). The Fallbrook court cited numerous California cases, and noted:

[A] percolating groundwater supply, although not part of the flow of a stream, may nevertheless be hydrologically connected with it, with the result that the extraction of water from either source diminishes the amount of water in the other. In such a situation, the percolating groundwater and the stream are regarded as one common water supply; and in considering the respective rights of those who secure water from the two interconnected sources, it is “immaterial whether the [underground] waters... were or were not part of an underground stream, provided the fact be established that this exaction from the ground diminished to that extent, or to some substantial extent, the water flowing in the stream.

Id. at 847 (citations omitted) (quoting [McClintock](#), 74 P. at 851).

[\[FN250\]](#). [Larsen v. Apollonio](#), 55 P.2d 196, 198 (Cal. 1936); [Barton Land & Water Co. v. Crafton Water Co.](#), 152 P. 48, 51 (Cal. 1915).

[\[FN251\]](#). [Cal. Water Code §§1253, 1255, 1257](#) (West 1971).

[\[FN252\]](#). In two decisions, for example, the Board has created permit conditions designed to protect prior rights to divert from percolating groundwater (in both cases Condition 11). [In re Permits 10657, Order WR 81-11, 1981 WL 40368, *1](#) (Cal. State Water Res. Bd. Sept. 17, 1981); [In re Applications 24578, Decision 1486, 1978 WL 21156, at *3, *14](#) (Cal. State Water Res. Bd. Sept. 25, 1978). In a decision involving a stream tributary to Pismo Creek in San Luis Obispo County, the Board said:

In order to issue a permit, the Board must find that unappropriated water is available to supply the applicant. Unappropriated water includes water that has not been either previously appropriated or diverted for riparian use. The owner of land overlying a groundwater basin, which is fed by percolation from a surface watercourse, possesses rights analogous to a riparian owner. Consequently, water is not available for appropriation from a watercourse which feeds a groundwater basin if the appropriation would materially damage the rights of the overlying landowners.

[In re Application 28883, Decision 1627, 1990 WL 264522, at *3 \(Cal. State Water Res. Bd. Nov. 27, 1990\)](#) (citations omitted).

[FN253]. E.g., [City of Lodi v. E. Bay Mun. Util. Dist., 60 P.2d 439, 441-42 \(Cal. 1936\)](#). “In the permits of the District... it was specifically provided that the District was under the responsibility of not injuring the underground water users, downstream from the dam.” Id.

[FN254]. E.g., [Miller v. Bay Cities Water Co., 107 P. 115, 122-25 \(Cal. 1910\)](#) (prohibiting an appropriation of surface waters where the appropriation would have reduced groundwater recharge necessary to support the use of an overlying user of percolating groundwater).

[FN255]. Knowledgeable authorities agree the “right” system is one that integrates management of hydrologically connected ground and surface waters. “Where... the stream and the groundwater are so closely connected that the use of one affects the other, the same law must be applied to both sources.” John D. Leshy & James Belanger, Arizona Law Where Ground and Surface Water Meet, 20 Ariz. St. L.J. 657, 658-59 (1988) (quoting Frank J. Trelease, Conjunctive Use of Groundwater and Surface Water, 27 Rocky Mtn. Min. L. Inst. 1853, 1856 (1982)). The National Water Commission also recommended:

State laws should recognize and take account of the substantial interrelation of surface water and ground water. Rights in both sources of supply should be integrated, and uses should be administered and managed conjunctively. There should not be separate codifications of surface water law and ground water law; the law of waters should be a single, integrated body of jurisprudence.

Nat'l Water Commission, Water Policies for the Future 233 (1973).

[FN256]. Priority is ordinarily based on the date of filing of a permit application. [Cal. Water Code §1225 \(West Supp. 2003\)](#); id. §§ 1450, 1455 (West 1971). However, the Board has the authority to adjust the priorities of water right applicants. [United States v. State Water Res. Control Bd., 227 Cal. Rptr. 161, 189 \(Cal. Ct. App. 1986\)](#). The Board has adjusted priorities in the public interest where junior applicants had longstanding claims and uses within the groundwater basin. Decision 1632, supra note 208, at *32 to *33. It might have authority to prefer existing users to new applicants, notwithstanding the application date, and perhaps grant priorities to existing pumpers who are new applicants that reflect their actual date of beginning pumping. Nonetheless, settling priorities would be a deeply troublesome issue.

[FN257]. See generally Blomquist, supra note 3, at 17-20.

[FN258]. A task that has not been made easier by a recent California Supreme Court decision. See [City of Barstow v. Mojave Water Agency, 5 P.3d 853, 863 \(Cal. 2000\)](#).