Salinity Control and the Riparian Right

Marcia J. Steinberg
California Department of Water Resources

Michael Schoenleber

Follow this and additional works at: https://scholarlycommons.pacific.edu/mlr

Part of the Law Commons

Recommended Citation
Available at: https://scholarlycommons.pacific.edu/mlr/vol19/iss4/6

This Article is brought to you for free and open access by the Journals and Law Reviews at Scholarly Commons. It has been accepted for inclusion in McGeorge Law Review by an authorized editor of Scholarly Commons. For more information, please contact mgibney@pacific.edu.
Salinity Control and the Riparian Right

Marcia J. Steinberg* and Michael Schoenleber**

INTRODUCTION

Water in the Delta meanders through hundreds of miles of channels; some water flows out of the Delta toward the Bay, some is used in the Delta, and some is pumped by the two projects from the southern Delta for export.1 A portion of the water that flows through the Delta is released from upstream storage reservoirs operated by the United States2 and the State of California.3 It is this water resource, the Sacramento-San Joaquin Delta, that has been the focal point, physically, politically and legally, of California's water resource controversies for the last two decades.4

---

* Marcia J. Steinberg is an attorney with the California Department of Water Resources.
** Michael Schoenleber is an attorney in private practice in Sacramento, California.
2. The United States Bureau of Reclamation operates the Federal Central Valley Project which stores water from the Sacramento, Trinity and American Rivers in various reservoirs. Water released from these reservoirs enters the Sacramento River and eventually flows into the northern part of the Delta.
3. The California Department of Water Resources operates the State Water Project which stores water from the Feather River in Oroville Reservoir. Water released from Oroville Reservoir enters the Feather River, flows into the Sacramento River, and then flows into the northern part of the Delta.
4. The Peripheral Canal, originally proposed by the Department of Water Resources and the Bureau of Reclamation in 1966, is illustrative of the controversy. The Canal was proposed to transport water around the Delta to the Project pumping plant in the southern Delta and to remedy reverse flow problems. In 1980, the Legislature passed the State Administration's Peripheral Canal proposal, Senate Bill 200, but the voters rejected it in a June, 1982, referendum.

1143
The controversy surrounding the Delta continues today. One legal issue stands out—how to properly allocate the Delta waters so as to meet Delta rights and those rights upstream and downstream from the Delta. At the core of this issue is the extent of water rights held by water users in the strategically-located Delta. This article explores the riparian rights in the Delta and discusses the extent to which the Delta riparian right entitles the water right holder to a degree of water quality protection, specifically, salinity control. To understand California’s water resource controversies, one must understand the Delta, the Delta riparian right, and the critical characteristic of the riparian right—the right to salinity control.

THE DELTA

The Delta is at the confluence of the Sacramento and San Joaquin Rivers. These rivers drain over forty percent of the area of the State. The Delta receives water flowing naturally from the two major rivers and other rivers and streams, water imported to the watershed from the Trinity River by the United States as part of the Federal Central Valley Project, and water stored in upstream reservoirs constructed by the United States, the State, and local agencies. Water flows through the Delta, Suisun Bay, San Francisco Bay, and on out to the Pacific Ocean.

Most of the Delta lowlands are situated at or below sea level. As a result, it is generally conceded that Delta water users have riparian water rights. Being situated at or below sea level, the Delta is affected by the ocean tides which bring water with high levels of ocean salts into these Delta lands. Water of higher salinity is repelled by the movement of upstream fresh water through the Delta toward the ocean. Salinity levels in the Delta are constantly changing, depending on the tides, winds, fresh water outflows and Delta use. This article analyzes the Delta riparian right to water quality in the form of

5. See, e.g., United States v. State Water Resources Control Bd., 182 Cal. App. 3d 82, 227 Cal. Rptr. 161 (1986). The State Water Resources Control Board received judicial direction in this case and in 1986 convened the San Francisco Bay/Sacramento-San Joaquin Delta Estuary Hearing (Bay-Delta Hearing) to adopt a Water Quality Control Plan and a Water Rights Decision applicable to the Delta. Id.

6. See United States v. State Water Resources Control Bd., 182 Cal. App. 3d 82, 277 Cal. Rptr. 161 (1986). This case will be discussed in this article only as it relates to the riparian right to salinity control. For a complete discussion of this case, see Robie, The Delta Decision—The Quiet Revolution in California Water Rights, 19 Pac. L. J. 1111 (1988).

protection from salinity. Relatively low levels of salinity are critical to the enjoyment of the Delta riparian right which is exercised predominately for irrigation of agricultural crops.

**THE RIPARIAN RIGHT**

The riparian right in California water law has many characteristics which significantly affect water use in the State. A riparian right is generally superior to appropriative water rights, is dependent upon ownership of land contiguous to a body of water, is correlative and is limited to use on certain contiguous riparian land and to use for certain purposes, including domestic, industrial, agricultural and power purposes. A riparian right is not lost by nonuse.

The riparian right is limited to the use of the natural flow of the watercourse, that is, water which flows in the state of nature with at most, only temporary regulatory storage. A riparian right holder has no right to divert water which was imported to the stream from another stream or watershed or which was in long-term or seasonal storage. The riparian right entitles the water right holder to have the stream of water flow to the riparian land. Most importantly for this discussion, the riparian right entitles the water right holder to a degree of water quality protection.

The degree of water quality protection depends on the circumstances of each case, but the law of riparian water rights clearly protects downstream riparians from upstream pollution which impairs the riparian's use. This does not mean, however, that the riparian right holder is entitled to enjoin all upstream uses to protect the riparians' right to water quality. Such a principle would seriously limit water development and use in this State. The downstream riparian right does not preclude upstream riparian and appropriative


uses which are reasonable\textsuperscript{12} and do not unnecessarily or maliciously injure the downstream riparian right.\textsuperscript{13}

The protection of downstream Delta water rights, primarily riparian rights, continues to be a major issue. The State Water Resources Control Board's most recent attempt to protect Delta water rights was in 1978 when it issued a Water Quality Control Plan for the Delta\textsuperscript{14} and Water Right Decision 1485.\textsuperscript{15} The legal challenges to the Plan and Decision resulted in the landmark case, \textit{United States v. State Water Resources Control Board.}\textsuperscript{16} The court in this case sidestepped the issue of the nature and extent of the riparian right to

\begin{footnotes}
\item[12] The 1928 constitutional amendment, which is now article X, section 2 of the California Constitution, was enacted in response to a series of decisions culminating in a California Supreme Court decision, \textit{Herminghaus v. Southern California Edison Co.}, 200 Cal. 81, 252 P. 607 (1926), which upheld the riparian right as against an appropriative right notwithstanding the unreasonableness and wastefulness of the riparian use. Article X, section 2 states:

It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water. Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which the owner's land is riparian under reasonable methods of diversion and use, or as depriving any appropriator of water to which the appropriator is lawfully entitled. This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained.

\textit{CAL. CONST. art. X, § 2.}


\item[14] \textit{STATE WATER RESOURCES CONTROL BOARD, WATER QUALITY CONTROL PLAN, SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH} (August 1978). The Plan designated Delta beneficial uses to be protected, established water quality standards for the reasonable protection of the beneficial uses, and established a program of implementation. \textit{Id.}

\item[15] State Water Resources Control Board [hereinafter S.W.R.C.B.], Decision 1485 (August 1978) (Sacramento-San Joaquin Delta and Suisun Marsh). The Water Right Decision imposed conditions on the water right permits of the United States for the Central Valley Project and on the water right permits of the State for the State Water Project. \textit{Id.} The purpose of these conditions was, in part, to protect Delta water rights from adverse effects from the projects; i.e., to ensure that the projects, as junior appropriators, do not impair the Delta rights. \textit{Id.} This was done by defining the Delta water quality right vis-a-vis the projects in terms of salinity levels and requiring that the projects be operated to meet certain salinity levels in various parts of the Delta. \textit{Id.} Project operations for meeting salinity levels include making releases from upstream storage reservoirs and reducing or refraining from making diversions from the Southern Delta through the State and Federal pumping plants. \textit{Id.}

\end{footnotes}
salinity control asserting simply that "existing constitutional and legislative authorities encompass the Board's obligation to protect the quality of the Delta waters from salt water intrusion." In short, the court held that the Board has a significant amount of discretion in determining proper levels of protection and in assigning responsibility to meet its requirements. The issue of the scope of the riparian right, however, remains. This issue is relevant to the Board as it attempts to satisfy its obligation to reasonably protect Delta water quality as part of the Bay-Delta Hearing and as part of its dry-year programs.

To the extent that Delta riparian rights encompass the right to salinity control, a certain amount of the natural flow cannot be used upstream and must be allowed to reach the Delta riparians. In other words, satisfaction of the riparian salinity control right is the obligation of upstream and Delta water right holders with equal or junior rights to the natural flow.

Those with equal rights are other riparians on the stream system. These riparians have a correlative or shared obligation to help meet

17. In its original opinion, dated May 28, 1986, the court specifically considered the issue of the riparian right to salinity control and, based on its interpretation of Antioch v. Williams Irrigation District, 188 Cal. 451, 205 P. 688 (1922), concluded that "common law water rights of riparians and appropriators do not include salinity control through curtailment of upstream diversions in order to leave enough water in the stream to resist saltwater intrusion." United States v. State Water Resources Control Bd., 182 Cal. App. 3d at 117, 227 Cal. Rptr. at 179.

In its Order Modifying Opinion and Denying Rehearing, dated June 25, 1986, the court omitted the foregoing conclusion regarding the riparian right to salinity control. After discussing Antioch, the court draws no conclusion from it, stating simply that, "Whatever final conclusion is to be drawn from Antioch regarding the nature and extent of common law riparian rights to salinity control, existing constitutional and legislative authorities encompass the Board's obligation to protect the quality of the Delta waters from saltwater intrusion." United States v. State Water Resources Control Bd., 182 Cal. App. 3d at 117, 227 Cal. Rptr. at 179.

Similarly, in the May 28, 1986 opinion, the court stated that "[W]hile common law affords water rights holders relief from pollution, such protection does not include rights to limit upstream use in order to permit sufficient flow for salinity control." United States v. State Water Resources Control Bd., 182 Cal. App. 3d at 117, 227 Cal. Rptr. at 178. Clearly, the court intended to leave this issue unresolved.

In an apparent mistake in drafting the Order Modifying Opinion and Denying Rehearing, the court failed to omit a later reference back to the now-omitted conclusion regarding the riparian right to salinity control. In the discussion of riparian industrial rights, the opinion states, "As we have previously discussed, the common law riparian rights of the paper companies do not include salinity control." Id. at 144, 227 Cal. Rptr. at 197. Leaving this reference in the opinion, we believe, was an oversight. See infra text at notes 59-80 (discussion of Antioch v. Williams Irrigation Dist., 188 Cal. 451, 205 P. 688 (1972)).
downstream riparian rights. Approporators on the stream system, which include the Projects, generally have priorities which are junior to Delta riparians. Appropriative priorities vis-a-vis other appropriators are based on the dates of the applications to appropriate water.

The Projects are subject to further statutory limitations protecting the Delta and watershed of origin, but these statutes do not affect the issue of the riparian right to salinity control. In addition, the Projects are responsible for mitigating their environmental effects.

With this understanding of the general nature of the riparian right, junior rights and the latest judicial direction regarding the responsibility to protect Delta water quality, we turn first to a discussion of the legal basis for the riparian right to water quality protection. We will then discuss specifically the riparian right to salinity control.

**The Riparian Right to Water Quality Protection**

One of the earliest American cases cited as upholding the common law riparian right to water quality protection is *Merrifield v. Lombard.* In this 1866 Massachusetts case, a downstream riparian landholder complained that an upstream proprietor was polluting the

---

   Among the functions to be provided by the State Water Resources Development System, in coordination with the activities of the United States in providing control for the Delta through operation of the Federal Central Valley Project, shall be the provision of salinity control and an adequate water supply for the users of water in the Sacramento-San Joaquin Delta.

21. Id. § 11460-11465 (West 1971) (prohibiting the Projects from diverting water which is reasonably required to adequately supply the beneficial needs of the watershed of origin or adjacent area).
23. 95 Mass. (13 Allen) 16 (1866).
stream with corrosive substances, fouling plaintiff's mill machinery. The court ruled that:

Any diversion or obstruction of the water which substantially diminishes the volume of the stream so that it does not flow 'ut currere solebut' [as it is wont to run], or which causes material impairment of quality or prevents its use in irrigation, machinery propulsion, or domestic consumption is an infringement of the right of other riparian owners.24

In 1886, the case of Lux v. Haggin25 established the common law riparian doctrine as a fundamental water rights law of California, along with the prior appropriation doctrine. Riparians have a right to have natural streams flow to the riparian land, subject to reasonable impairment in quantity and quality by other users (the correlative rights doctrine).26

Following the Lux v. Haggin decision, early California cases adopted the common law riparian right respecting natural water quality protection.27 In a representative case, Joerger v. Pacific Gas & Electric Co.,28 the plaintiff was a riparian who diverted water for irrigation and domestic purposes. He brought an action against the defendant utility company to quiet title to land and water rights and for damages caused by interference with his rights. The defendant was an upstream riparian using the water for hydroelectric power generation. The plaintiff complained that the defendant's construction and operation

25. 69 Cal. 255, 10 P. 674 (1886).
27. See People v. Elk River Mill and Lumber Co., 107 Cal. 214, 40 P. 486 (1895); Peterson v. Santa Rosa, 119 Cal. 387, 51 P. 557 (1897); Holmes v. Nay, 186 Cal. 231, 199 P. 325 (1921). Appropriators, as well as riparians, have a right to have the natural quality of water protected against polluting uses by upstream users with inferior rights. The right was established in a series of older cases. W. Hutchins, supra note 8, at 123. This right was upheld in a case where a downstream appropriator sought to enjoin and recover damages from a subsequent upstream appropriator. See Wright v. Best, 19 Cal. 2d 368, 121 P.2d 702 (1942). The plaintiff in Wright complained that the upstream user polluted the stream with mine tailings which rendered the water unfit for plaintiff's domestic and agricultural uses. The court applied the standard of material impairment to determine the extent of plaintiff's right to water quality. The court said:

"It is an established rule in this State that an appropriator of waters of a stream, as against upper owners with inferior rights of user, is entitled to have the water at his point of diversion preserved in its natural state of purity, and any use which corrupts the water so as to essentially impair its usefulness for the purposes to which he originally devoted it, is an invasion of his rights. Any material deterioration of the quality of the stream by subsequent appropriators or others without superior rights entitles him to both injunctive and legal relief."  

Id. at 378, 121 P.2d at 709.
28. 207 Cal. 8, 276 P. 1017 (1929).
of the dam and power plant polluted the river by introducing debris into it and by causing the stream to become stagnant, with the effect that the water of the stream was unfit for his beneficial uses. Although the court acknowledged that the defendant's generation of power was a proper riparian use, it affirmed the plaintiff's right to water quality protection, noting:

The Law is well settled that any use of a stream which materially fouls and adulterates the water, or the deposit or discharge therein of any filthy or noxious substances that so far affect the water as to impair its value for the ordinary purposes of life, or anything that renders the water less wholesome than when in its ordinary state will constitute a nuisance, which courts of equity will enjoin, and for which a lower riparian owner, injured thereby, is entitled to redress.29

The subsequent adoption of the constitutional amendment in 1928 was a landmark in the development of California water rights law.30 The amendment applies to all classes of water rights, including established riparian rights.31 It restricts the enforcement of riparian rights vis-a-vis a junior claimant where such enforcement would protect an unreasonable use or lead to the waste of water, a resource vital to the economic development of the State. However, the general riparian right to water quality continues to be protected in California law, subsequent to the 1928 amendment, as long as the riparian use is beneficial and the desire for water quality protection is not unreasonable in the context of the constitutional policy regarding waste.32

**THE RIPARIAN RIGHT TO WATER QUALITY PROTECTION FROM UPSTREAM DIVERSIONS**

Seawater incursion is included in a class of water quality problems which courts do not regularly confront. The more common type of water quality dispute involves a direct discharge by the upstream proprietor of waste, such as sewage, mine tailings, or pesticides. This discharge impairs the natural water quality to the detriment of the downstream user. The common law rules regarding water quality rights were developed around this type of direct pollution.33

---

However, the application of the general rules in water quality cases has not been limited to direct discharges by upstream proprietors. In his definition of the riparian right, one author observed:

Riparians have a natural right to have natural streams flow unimpaired in quality as well as quantity and any use of a stream by one proprietor which defiles it to such a degree as essentially to impair its purity and usefulness for any purposes to which running water is usually applied is an invasion of a private right for which those injured thereby are entitled to a remedy.

In the case of seawater incursion in the Delta, the problem is not attributable to the upstream users’ discharge of waste. No claim is being made that upstream users are placing something in the water that affects natural purity. The real cause of seawater incursion is the decrease in the natural flow of the river brought about by the upstream users’ diversion of water. The decrease in flow has the effect of reducing the hydraulic force of the river. This force of flow acts as a barrier to the incursion of seawater at the western end of the Delta. With the reduction in countervailing fresh water forces, marine tidal action pushes the seawater farther up into the Delta. The waters become more saline and, if the incursion is substantial, unfit for domestic, agricultural and industrial uses.

California cases have specifically concluded that the riparian right extends to protection against water quality impairment caused by upstream diversions. In Crum v. Mt. Shasta Power Corp. and connected cases, McArthur v. Mt. Shasta Power Corp. and Albaugh v. Mt. Shasta Power Corp., the defendant utility company dammed up a river upon which plaintiffs were riparian water users. The defendant’s use was also riparian. During the summer months, the defendant’s diversion of the natural flow for power generation purposes caused the stagnation of the pool around which the plaintiffs lived and from which they drew water. Greater flow from the dammed river was needed to freshen the pool. The plaintiffs sued for damages on the basis of this injury to their right. The court sustained this claim by holding the injury actionable under the general riparian right recognized in California:

---

35. J. Gould, supra note 34, at 430 (emphasis added).
37. 3 Cal. 2d 704, 45 P.2d 807 (1935).
38. 9 Cal. 2d 751, 73 P.2d 217 (1937).
Under the California authorities and under the law of these cases as enunciated in former appeals, a riparian owner, even as against another riparian, is entitled not only to an undiminished flow of water, except as reduced by the reasonable use of other riparians and prior appropriators, but also to a substantially unpolluted stream. The riparian owner is entitled not only to the same quantity of water, but also to the same quality of water, provided by nature in the stream.39

The plaintiffs were entitled to relief after proving that the defendant's diversion (i.e., construction of the dam) caused the material impairment of the quality of water in the pool. In *Meridian, Ltd. v. San Francisco*,40 a riparian landowner on the Tuolumne River sought a decree from the court ordering the defendant, an upstream appropriator with lower priority rights, to limit its diversions of water. The defendant municipality built a dam on the Tuolumne River for water storage. The water was used for power generation purposes. It was also diverted through a major aqueduct to supply the needs of the city's residents and industries. Many users of water for agricultural purposes were diverting water between the defendant's dam and the plaintiff's point of diversion. The return flows from these intermediary users contained much salt, alkalies, and other chemical substances, which would render the water unfit for irrigation if sufficiently concentrated. The plaintiff claimed substantial injury on the basis that the diminution of flow caused by the defendant's diversion led to an increase in the normal mineral concentration of the water. The California Supreme Court, finding that substantial injury was not demonstrated by the evidence, reversed the trial court's issuance of an injunction. However, the court stated that, with sufficient evidence, the plaintiff would be entitled to relief under its superior riparian right.41 The ruling that the general riparian's right to water quality is applicable to this type of pollution is consistent with the court's earlier treatment of the *Crum* case.

The court in *Meridian* also discussed the relationship of the water quality element of the riparian right to the constitutional standard requiring reasonable use. The court stated:

> Under the amendment of 1928 the right of the riparian attaches to, but to no more than so much of the flow as may be required or used consistently with the amendment. That is, the riparian is

---

40. 13 Cal. 2d 424, 90 P.2d 537 (1939).
entitled to all of the water of the stream, both in the quantity and quality of its natural state, which he is able to put to a reasonable, beneficial use, and to be protected in that right by the injunctive processes of the court.\textsuperscript{42}

A more recent case, \textit{Deetz v. Carter},\textsuperscript{43} followed its predecessors in upholding the riparian right where water quality was impaired due to excessive upstream diversion. The dispute involved two riparian landowners on a small stream. Since the plaintiff, who was the downstream user, depended on the water for his domestic supply, his needs were accorded a statutory preference.\textsuperscript{44} The diminution in flow in the stream caused by the defendant's diversion of the water for agricultural purposes made the quality of the remaining water unfit for the plaintiff's domestic uses. The plaintiff claimed rights in the entire flow of the stream to maintain its fitness even though only a portion of the flow was actually being consumed for his domestic purposes. The plaintiff used the remainder for irrigation, a non-domestic purpose. The court held that the plaintiff's demand for the full flow of the stream was reasonable in light of the statutory preference given to domestic uses. In the court's view, the right should extend to that flow necessary to make the preferred right effective.

Courts in jurisdictions other than California have also upheld the riparian right to protection of water quality from upstream diversions. A New Jersey case, \textit{Acquackanonk Water Co. v. Watson},\textsuperscript{45} involved a dispute between an upstream water utility company and a downstream riparian diverter who operated a bleachery. The utility company had proposed to increase the height of its upstream dam. The plaintiff bleachery operator complained that modification to the dam would so diminish the flow of the river as to degrade the natural clarity of the water. This degradation would make the water unfit for plaintiff's use in the bleachery. The court gave protection to the downstream riparian by requiring the defendant to forego the modification of the height of its dam so as not to cause any further diminution or interruption of the stream flow. Likewise in a New York case, the erection of a dam so diminished the flow of a river that decomposed matter became exposed to the air. This activity

\textsuperscript{42} \textit{Id.} at 447, 90 P.2d at 548 (emphasis added).
\textsuperscript{43} 232 Cal. App. 2d 851, 43 Cal. Rptr. 321 (1965).
\textsuperscript{44} \textit{See} \textit{CAL. WATER CODE} § 106 (West 1971).
\textsuperscript{45} 29 N.J. Eq. 366 (1878).
created an actionable public nuisance because of its detrimental effect on health. An early Texas case resolved a similar pollution problem in favor of the downstream riparian. In *Biggs v. Lee*, an upstream user's diversions so decreased the flow of the stream that the mineral content of the remaining water became excessive, making it unfit for the complaining riparian's domestic and agricultural uses. Although the defendant upstream user was a riparian landowner, his water diversions were for use on non-riparian lands. Therefore, his rights were inferior to, not correlative with, the riparian rights of the plaintiff. This case is similar to one where a riparian sues an appropriator with inferior rights. In the context of this relationship between the parties, the court ruled: "The riparian owner . . . is entitled to sufficient water for his land's purposes. This necessarily means sufficient usable water, and it would be proper for a decree, if he shows himself entitled to one, to award sufficient water so as to avoid mineral impregnation. . . ."

These cases support the established rule that when the upstream users' diversions so diminish the flow as to cause a material impairment of the water quality, downstream riparian landholders who use water for reasonable, beneficial purposes are entitled to relief against upstream users, especially against those whose water rights are subsequent in time or inferior in priority. In addition, quality impairment by diminution in flow has been treated the same as the more usual type of water quality impairment, the direct discharge of waste. The riparian right holder thus is entitled to enjoy the natural flow of the stream to the extent of reasonable use and to protection from water quality impairment by both direct discharges and diminution in flow.

**THE RIPARIAN RIGHT TO SALINITY CONTROL**

Although courts have not had much occasion to deal specifically with seawater incursion problems, it seems that the general rules governing the more common water quality disputes still apply. Jurisdictions other than California have dealt with the seawater incursion problem. In these jurisdictions, the injured water users have been protected from seawater incursion caused by the actions of others.

---

47. 147 S.W. 709, 711 (Tex. Ct. App. 1912, error dismissed).
48. *Id.*
Two cases, both from Texas, involved plaintiffs who had riparian rights to the affected stream. In the first case, *Bigham Bros. v. Port Arthur Canal and Dock Co.*,49 the plaintiff was a rice farmer who used the waters of the stream for domestic and agricultural purposes. The plaintiff sought damages for impairment of the natural water quality against the defendant, a canal company working under statutory authority of the state to improve navigable waters. The defendant, by building a canal over dry land between a river which flowed into the sea and the stream upon which the plaintiff was a riparian owner, precipitated the incursion of seawater up to and beyond the plaintiff's point of diversion. The water became unfit for the plaintiff's uses. The question faced by the court was whether seawater incursion is a type of water pollution protected under the general riparian right to water quality. The court held that it was, and awarded relief to the injured owner. The court reasoned that the origin of the salt, whether a polluting source from above or the sea below, was irrelevant; relief would have been granted in the former case, so it would also be granted in the latter.50

The second case is *Houston Transportation Co. v. San Jacinto Rice Co.*.51 The plaintiff, a rice farmer, held riparian rights to divert water near the mouth of the river for domestic and agricultural purposes. The defendant was a dredging business who dredged the mouth of the river for sand to be used in making concrete. The plaintiff sued to enjoin the defendant from removing a large sand bar at the mouth of the river which provided an effective, natural barrier to the influx of seawater. Without such a barrier, seawater would have flowed well beyond the plaintiff's diversion point, especially during the seasonal flood tides. The court granted the injunction on the basis of the plaintiff's riparian right to water quality. This right was upheld despite the significant public interest involved in insuring a supply of sand and concrete necessary for the development of the nearby city of Houston.

From these two cases, it is clear that the State of Texas includes the element of salinity control in the common law riparian right to water quality. The plaintiffs in the Texas cases were not asking that upstream users forego their diversions in order to maintain the necessary outflow and quality at the mouth of the river. However,

49. 100 Tex. 192, 97 S.W. 686 (1906).
50. *Bigham*, 100 Tex. at 202, 97 S.W. at 689.
recognition of the plaintiffs' claims was attacked on other important public policy grounds. These attacks failed to sway the opinion of the two courts.

There are other cases involving injuries to property rights caused by seawater incursion that, although not directly addressing the question of whether salinity control attaches to riparian rights, deserve mention for the sake of completeness. First, in the long, complex case of United States v. Fallbrook Public Utility District, the United States sought to establish rights to the full flow of a stream as against an upstream appropriator. The United States was the owner of a tract of land located near the ocean and overlying a large groundwater basin fed by the waters of an adjoining stream. The government asserted that it needed the entire flow of the stream in order to recharge the underground basin. The recharge created a fresh water barrier which prevented seawater intrusion. The case dragged on for more than ten years, but the issue of salinity control rights was never specifically decided in the published opinions.

A serious drought brought on the dispute in New Jersey v. New York. The State of New York planned to divert headwaters of the Delaware River out of the watershed for the municipal uses of New York City. The full diversion would have led to significant seawater incursion at the mouth of the river, resulting in great harm to New Jersey's commercial oyster fisheries and other water users. The court did not interpret the rights of the two parties according to strict riparian law because it viewed the dispute as one between two sovereigns. In an attempt to reconcile the substantial interests of both states, the court issued a decree limiting the amount of water to be diverted by New York and specifying a minimum rate of flow at certain downstream points to protect those users near the mouth of the river.

The earliest American case involving seawater pollution arose in Massachusetts. In Mears v. Dole, the defendant owned land bordering on the ocean. In the process of excavating for gravel, the defendant dug a long ditch which was open to the ocean. Due to tidal action, the seawater came up the ditch causing injury to the

55. 135 Mass. 508 (1883).
plaintiff's nearby property. The seawater percolated into and polluted the groundwater underlying the plaintiff's land. In addition, the seawater overflowed and eroded part of the plaintiff's land. In deciding that the defendant's action constituted a nuisance, the court ruled that: "A person who excavates on his land in such a manner as to let in the sea, which undermines and injures adjoining land of another, is liable to an action by the latter for the injuries so caused, including injury done to a well by the percolation of saltwater." The court said that the effect of the defendant's activity was significant, not the nature of the activity: "It is true that the injury was caused by the natural action of the sea; but this action was exerted at a place where it would not have occurred except for the acts of the defendant." The court also stated, "It is well settled to be an actionable tort to allow filthy water to percolate from a vault through the soil to the injury of a well of a neighbor. Though seawater may not be filthy, it is as effectually destructive as is such water.

On its facts, Mears v. Dole is not significantly different from the previously discussed Texas cases. At issue was the defendant's liability for removing a natural barrier to seawater pollution. As in the Texas cases, this one hundred five-year-old common law case held that the defendant was liable for his invasion of the property right.

Numerous cases from California and other jurisdictions have recognized the riparian right to water quality protection from upstream diversion, and there is authority from other jurisdictions recognizing the riparian right to salinity control. The one California case that directly addresses the question of the right to salinity control includes language which can be interpreted as reaching a conclusion contrary to all of the authorities previously discussed. But this case, Antioch v. Williams Irr. Dist., is not determinative of the issue of riparian rights to salinity control. Rather than a ruling on the right to salinity control, Antioch is more accurately characterized as

56. Mears, 135 Mass. at 510.
57. Id.
58. Id.
59. 188 Cal. 451, 205 P. 688 (1922).
61. In the past half century since the decision was rendered, conditions have changed to such an extent that even its precedential value with respect to appropriative rights is limited.
a reasonable use case. Like the 1928 amendment to the California Constitution some years following Antioch, the Supreme Court's decision in effect prohibited a waste of water. The dispute in the Antioch case arose out of drought conditions faced by Northern California in the early 1920s. The plaintiff, Antioch, a municipality located near the mouth of the Sacramento-San Joaquin Delta, diverted water from the Delta under an appropriative right. This right entitled Antioch to a quantity of water equal to a continuous flow of about one cubic foot per second (cfs). Under normal climatic conditions, Antioch had no problem with saltwater incursion at its point of intake and, therefore, did not suffer injury due to the diversions of upstream users. However, conditions changed during the drought. The flow of water into the Delta was reduced to such an extent that the tides pushed highly saline water up into the mouth of the Delta past Antioch's intake point. The salinity content of the water became so high as to make it unfit for domestic uses. To assure a salinity barrier that would effectively protect Antioch's interests a minimum flow of 3,500 cfs would have to enter the Delta from the Sacramento River. Such a flow would have been maintained in the stream, even during the extreme dry season, but for the large diversions by the defendants on the river above the City of Sacramento. Therefore, since these defendant farmers held lower priority appropriative rights, Antioch brought suit to enjoin their uses of water.

The California Supreme Court refused to acknowledge the impairment of water quality due to salinity incursion as an actionable injury. The court noted that the holding was an exception to the general rule that an appropriator for beneficial uses "has the right to enjoin the pollution of the stream above him, so that the water may flow down to his place of diversion in a condition as suitable for these uses as it was at the time he acquired his right to take it."


62. See supra notes 30-32 and accompanying text.
63. Nonetheless, prior to the 1928 amendment, under the appropriative rights doctrine, appropriators were subject to the requirement of reasonable use and the prohibition of waste. See Thayer v. California Dev. Co., 164 Cal. 117, 137, 128 P. 21, 29 (1912).
64. Antioch, 188 Cal. at 467, 205 P. at 695.
65. Id. at 459, 205 P. at 692.
The primary reason for carving out this exception was to prevent what the court considered a waste of a resource that was vital to California's agricultural development. To uphold the plaintiff's right to a flow of 1 cfs would mean that over 3,000 cfs of water otherwise available for upstream agricultural purposes would flow into the sea without any beneficial use. This great disparity led the court to conclude "it would be hard to conceive of a greater waste for so small a benefit." Of critical importance in analyzing the Antioch decision, however, is the fact that it preceded the 1928 constitutional amendment prohibiting waste.

Associated with the problem of waste was the court's concern that a recognition of a prior appropriator's right to salinity control would hinder further upstream development. Future diverters of water above the Delta, both private and public, could not safely invest in improvements and diversion facilities without coming to terms with those appropriators near the mouth of the Delta who might be adversely affected. Private agreements and public condemnation would be problematic and costly because of the difficulties involved in ascertaining all necessary parties in a settlement and determining the extent of injuries to and value of the prior appropriator's right. In addition, in the case of an actual violation of the right, the senior appropriator's claim against any particular upstream diverter for damages would be difficult to prove. In practice, the downstream right holder would be forced to give up a claim for damages, or the upstream appropriation would have to be enjoined.

The court in Antioch further distinguished this case from those which had applied the general rule by noting the novelty of the pollution involved and the implicit flexibility of the appropriation doctrine to adapt to the peculiar conditions existing in the State. The court was also perturbed that the town of Antioch would pursue its claim in the courts when the litigation could have been avoided by merely "moving its pumps a few miles up river" where it could have obtained good quality water.

---

66. Id. at 461, 205 P. at 693.
67. But see supra notes 30-32, 62 and accompanying text.
68. Antioch, 188 Cal. at 465, 205 P. at 694-95.
69. Id. at 461, 463, 205 P. at 693, 694.
70. Id. at 465, 205 P. at 694. The court here may have presaged the line of cases which held that even riparian owners may be required to endure some inconvenience or to incur reasonable expenses in implementing physical solutions to prevent waste or unreasonable use. See Rancho Santa Margarita v. Vail, 11 Cal. 2d 501, 81 P.2d 533 (1938); People ex rel. State Water Resources Control Bd. v. Forni, 54 Cal. App. 3d 743, 126 Cal. Rptr. 851 (1976).
For all of the above reasons, *Antioch* was decided correctly. The court avoided a sizeable waste of water and allowed for future development of California's water supplies. In modern parlance, although the court recognized Antioch's appropriative right, it included in its analysis the reasonable use requirement. Under the circumstances, it would have been unreasonable to provide the water quality, in terms of salinity control, which Antioch claimed it deserved. The court's discussion of the right to salinity control, however, was not needed and has resulted in significant confusion.

The *Antioch* court's discussion of salinity control focused on the potential unreasonable use associated with the flows needed to provide the salinity control. In the sixty years since *Antioch*, circumstances have changed significantly. Unreasonable use is now constitutionally prohibited. And most notably, water quality standards for protection of Delta rights are adopted administratively by the State Water Resources Control Board (State Board). Some of these standards encompass limits on salinity at various points in the Delta. The federal and state projects currently meet these standards. If the salinity level standards adopted by the State Board are reasonable and otherwise legal, then the potential waste and obstacles to development that concerned the *Antioch* court cannot exist. At present, the State Board makes the all-important determination of reasonableness. The State Board, in its standard setting process, determines the appropriate level of protection, in terms of salinity control, of Delta riparian water quality.

This administrative procedure did not exist at the time *Antioch* was decided. Had it existed, the *Antioch* court may not have viewed the right to salinity control with such alarm. In view of the administrative procedure, a modern court should not rely on *Antioch's* discussion of salinity control.

The *Antioch* court's specific discussion of the right to salinity control is flawed. The court tried to distinguish the two Texas

---

72. Water quality standards may also set flow limits. See *S.W.R.C.B. Decision 1485,* (August 1978) Sacramento-San Joaquin Delta and Suisun Marsh. See also supra note 15 and accompanying text.
74. *See Cal. Water Code* § 1360 (West 1971) (State Water Resources Control Board water right decisions may be reviewed by writ of mandate).
decisions which recognized the riparian right to salinity control. The basis of the distinction, however, is not clear from the opinion. The major basis of the distinction seemed to be that the Texas courts failed to consider the important policy of water conservation that is involved in the establishment of a right to salinity control. This distinction is not convincing. Also, the court in Antioch indicated that the seawater incursion problem faced by the Texas courts was a more direct interference with property rights, and therefore more aptly resolved by the general property right rules. However, it is difficult to distinguish among different causes of seawater incursion. In the Texas cases, neither defendant discharged anything into the river. However, the effect of their activity was the removal of a natural barrier to seawater incursion. In the same manner, the defendants in the Antioch case were not discharging any waste into the river. Their diversions did cause the removal of another type of salinity barrier, one formed by the hydraulic force of the river.

The fact that Antioch was a dispute between appropriators is of some consequence. Riparian rights were not involved. The Antioch court may have viewed an assertion of a riparian right to salinity control more favorably. The Antioch court suggested that its ruling on the extent of appropriative rights should be construed narrowly: “The rule we may adopt here can scarcely be a precedent for any case except one arising upon these two rivers concerning a similar claim of some prior appropriator near the outlets thereof.”

In addition, the court at another point specifically stated that the issue of riparian use was not being addressed. However, it should not matter whether the water user at the western edge of the Delta is claiming superior rights on the basis of the riparian or the appropriation doctrine. The establishment of a riparian right to salinity control would give rise to the same problems of waste and deterrence to economic development that the court sought to avoid in its limitation of the appropriative right.

In fact, a case decided by the California Supreme Court only four years after Antioch suggests that the riparian right would be given greater protection in the face of contrary public interests. In Her-
minghaus v. So. Calif. Edison Co., the plaintiff was a downstream riparian who sought to enjoin the upstream appropriator's use of the water. The defendant had dammed up the flow of the river so as to provide a suitable head for power generation. Because of damming, the full natural flow of the river would not reach the plaintiff's lands during the period of greatest runoff. This greatly diminished the value of plaintiff's agricultural lands because he depended upon this periodic, full flow to inundate his lands and produce a silting, fertilizing and irrigating effect. On the basis of the common law rule that "a riparian owner is entitled to restrain any diversion by a junior appropriator which will deprive him of the customary flow of water which is or may be beneficial to his land", the court granted the injunction despite the great waste involved in protecting the right. In reflecting upon the policy arguments, the court said, "public policy is at best a vague and uncertain guide, and no consideration of policy can justify the taking of private property without compensation."

The constitutional amendment of 1928 was passed in reaction to the Herminghaus case. As previously explained, the amendment requires the courts to evaluate all water rights claims in the context of the specified policies of reasonableness and waste prevention. The riparian right, which previously entitled the riparian owner to all waters of a stream without regard to the reasonableness of his use against an appropriator, is now limited by the amendment to reasonable, beneficial use as against appropriators and riparians alike.

It would seem that the amendment could have removed the element of salinity control from the riparian right (assuming that such element existed previously) where the protection of such right would require a great waste of water into the sea. However, cases decided after 1928, surprisingly, have reached a different conclusion. In a factual situation very similar to that in Herminghaus, the United States Supreme Court held that the riparian's right to the full natural flow as against a subsequent appropriator survived the California consti-

---

80. 200 Cal. 81, 252 P. 607 (1926).
81. Herminghaus, 200 Cal. at 100-01, 252 P. at 615.
82. Id. at 101, 252 P. at 615.
84. See supra note 12 and accompanying text.
The Court refused to grant protection in the form of an injunction against the defendant United States because the effect of an injunction would have been to cause great amounts of water to be lost to the sea. The Court said that this relief would be contrary to the constitutional policy. In spite of the fact that enforcement of the right by way of an injunction would have resulted in a waste or unreasonable use of water, the Court found that the riparian's use of overflow water was reasonable. The remedy for the violation of the riparian's right was limited to compensation for the taking of the right. The California Supreme Court later noted this result without disapproval in Joslin v. Marin Municipal Water District. 87

In other dicta, the California Supreme Court has indicated that the large waste involved in protecting an otherwise reasonable water use does not destroy the right, but rather limits the remedy for the invasion of the right. City of Lodi v. East Bay Municipal Utility District 88 involved the right of a prior appropriator to sufficient flow of a river to recharge an underground water basin. Similarly, Meridian, Ltd. v. San Francisco 89 involved the right of a riparian to sufficient flow to protect water quality. These cases provide post-1928 precedent for protection of an established water right, especially riparian rights, in factual situations similar to that presented in the Antioch case.

The result reached in Antioch is totally consistent with current law. Antioch provides little if any support contrary to the great weight of authority that recognizes the riparian right to salinity control under appropriate circumstances.

Conclusion

The right to salinity control is a crucial element of the riparian right. It is part of the right to water quality protection. This right extends to protection from traditional sources of pollution by discharges into a body of water and from less typical water quality degradation due to upstream diversions.

Inclusion of the element of salinity control within the general riparian right to water quality is consistent with case precedent in

---

88. 7 Cal. 2d 316, 344-45, 60 P.2d 439, 452 (1936).
California as well as extrajurisdictional authority. However, the right will not be upheld in a particular case unless it is also consistent with limitations expressed in article X, section 2 of the California Constitution.

The riparian right of landowners in the Delta includes protection from seawater incursion to the extent that such protection is reasonable under the circumstances and could have been achieved under natural river flow conditions. The riparian right of Delta landowners does not entitle them to water from the projects which is not natural river flow. Stevinson W. Dist. v. Roduner, 36 Cal. 2d 264, 270, 223 P.2d 209, 213 (1950); Stevens v. Oakdale Irrigation Dist., 13 Cal. 2d 343, 90 P.2d 58 (1939). The State Water Resources Control Board has set water quality standards for the state and federal projects to meet to protect Delta users. See S.W.R.C.B. Decision 1485, (1978) (Sacramento-San Joaquin Delta and Suisun Marsh). Standards were also set to protect fish and wildlife. These standards were not intended to protect Delta riparian rights. Assuming the Delta agricultural standards accurately portray Delta rights, then meeting those standards would only give Delta users that to which they are entitled and would not violate constitutional policy prohibiting waste of water.

The nature of the relief that would be granted is not addressed here. The fact that the riparian right would be recognized and given some form of protection is important. Many different forms of relief are available for injuries to the right. See Peabody v. City of Vallejo, 2 Cal. 2d 351, 374-78, 40 P.2d 486, 494-96 (1935) (owner entitled to compensation and injunctive relief); W. HutcHINS, supra note 9, at 267-84.

90. This is because the riparian right of Delta landowners does not entitle them to water from the projects which is not natural river flow. Stevinson W. Dist. v. Roduner, 36 Cal. 2d 264, 270, 223 P.2d 209, 213 (1950); Stevens v. Oakdale Irrigation Dist., 13 Cal. 2d 343, 90 P.2d 58 (1939). The State Water Resources Control Board has set water quality standards for the state and federal projects to meet to protect Delta users. See S.W.R.C.B. Decision 1485, (1978) (Sacramento-San Joaquin Delta and Suisun Marsh). Standards were also set to protect fish and wildlife. These standards were not intended to protect Delta riparian rights. Assuming the Delta agricultural standards accurately portray Delta rights, then meeting those standards would only give Delta users that to which they are entitled and would not violate constitutional policy prohibiting waste of water.

91. The nature of the relief that would be granted is not addressed here. The fact that the riparian right would be recognized and given some form of protection is important. Many different forms of relief are available for injuries to the right. See Peabody v. City of Vallejo, 2 Cal. 2d 351, 374-78, 40 P.2d 486, 494-96 (1935) (owner entitled to compensation and injunctive relief); W. HutcHINS, supra note 9, at 267-84.