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Notes

The Water Nectar, and the Rocks Pure Gold: Finding a Legal Structure to Facilitate Necessary Change in California’s Jewel, the Delta

KAKUTI M. LIN*

It is critical that we stay focused on rebuilding our water infrastructure—the economy, the environment, hundreds of thousands of acres of farmland and 25 million Californians depend on us finding a solution. The longer we wait the worse and more complicated the problem will get.

—Governor Arnold Schwarzenegger

And I as rich in having such a jewel
As twenty seas, if all their sand were pearl,
The water nectar, and the rocks pure gold.

—Shakespeare

INTRODUCTION

Water supply is quickly becoming a major issue that will affect politics and development throughout the world. World leaders recognize water as a matter of preeminent concern, and predict it will be a controlling factor in future international interactions. The history of

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2. WILLIAM SHAKESPEARE, TWO GENTLEMEN OF VERONA act 2, sc. 4.

[647]
California's water usage, combined with California's huge economic role in the world, make the fragility of the state's water supply an urgent problem. Currently, two-thirds of California's water is transferred through the Sacramento–San Joaquin Bay-Delta, which consequently gives the Delta region a disproportionate economic effect on the entire state. As an extensive wetland habitat that is home to several endangered species, the Delta is straining under the burden of balancing water supply and environmental needs. Furthermore, the legal history of the land and water rights in the area is quite unusual. The result of this combination of factors is a highly politically charged atmosphere that makes any policy changes very difficult to accomplish.

Unfortunately, the current mode of management of the region is untenable in the long term. For example, the levees that protect the landowners in the area and keep sea water out of the fresh water supply are at risk from seismic events and climate change, and some have already failed even in the absence of any catastrophic event. Because thorough rehabilitation of the levee system is practically impossible, there must be a fundamental change in the way the Delta is used. One of the major obstacles to change is that there are many state and federal agencies which have jurisdiction over different parts of the region, and there is no comprehensive system of governance through which decisions can be made about the region as a whole. In the absence of a working governance system, stakeholders have become entrenched in their positions, relying on old assumptions about their rights, and are afraid or unwilling to reach compromises that will allow change in the region.


While there are many political and scientific aspects to the problem, there are also fundamental legal issues which, if addressed, can facilitate positive change. Because most land in the region was "reclaimed" by private parties under orders to the state from the federal government, there is an unusual mix of applicable federal and state statutory law, supplemented by a healthy dose of California common law that covers water and land use in general. Furthermore, the nature of the landscape made accurate surveys difficult to conduct in the nineteenth century. This led to a significant lack of clarity in the legal status of land that was developed.

This Note will examine matters of particular legal interest in the Delta that deserve attention before the problems of ecosystem and water supply stability can be addressed in a comprehensive manner. Part I sets the scene by describing the physical landscape and political history of the Delta. Part II introduces the complex legal foundation on which all Delta issues rest. Part III notes one particular legal conundrum that is emblematic of the Delta's tangled evolution. Finally, Part IV proposes a clarified legal backdrop that would encourage stakeholders to come to agreements, allowing for a stable Delta ecosystem and water supply while fairly distributing the costs of change.

I. THE JEWEL: THE RESOURCES AND HISTORY OF THE DELTA

When the first settlers came to California, much of what they saw between what is now Sacramento and San Francisco was one huge span of marsh and tidelands resulting from the natural draining of the Sacramento and San Joaquin Rivers into the Pacific Ocean.\(^8\) The amount of water in the area was highly variable depending on the season and year, and much of the marsh was brackish, with saline sea water mixing into the fresh water flowing down from the rivers.\(^9\) The landscape was lush, and many birds and fish made their homes in the region, including a huge salmon population that passed through the area during spawning season.\(^10\) Although highly valuable as a source of great biodiversity, land in the region was quite problematic for settlers. For example, land that is now the city of Sacramento could be dry for much of the year, but was in fact on a flood plain, resulting in frequent flooding of the young city.\(^11\)

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9. Lund et al., supra note 8, at 17–18.
10. Id.
Historical photographs and engravings show early residents paddling down streets past shops and homes.\textsuperscript{12}

A. THE BEGINNINGS OF TROUBLE

Two phenomena combined in the middle of the nineteenth century to lead to the draining of land in the Delta. The first was the local impact of the Gold Rush. It brought many people to the area who, though drawn by the prospect of gold, stayed for the promise of fertile farming, prompting the need for land in the area that was habitable year-round.\textsuperscript{13} The second was the general federal push to “reclaim” marshland in order to encourage expansion of productive agricultural land throughout the nation.\textsuperscript{14} In the same year that saw statehood for California, the federal government passed the Swamp and Overflowed Lands Act,\textsuperscript{15} which granted federal marshlands\textsuperscript{16} to the states for the purpose of selling it to settlers who could reclaim it.\textsuperscript{17} California immediately started selling the land for a dollar per acre to anyone who would build levees and drain the land.\textsuperscript{18} This was the beginning of a drastic change in the Delta landscape, and became the foundation for many of today’s legal dilemmas.

In 1861, a Board of Reclamation was established to facilitate coordination among small parcel owners in the building of continuous levees, and to organize large-scale reclamation projects.\textsuperscript{19} A half million acres of marshland in the Delta was in private ownership by 1871, and substantial levees had already been built by developers.\textsuperscript{20} When the Board of Reclamation was dissolved, the counties inherited responsibility for levee maintenance.\textsuperscript{21} Continual flooding in the area led, in 1911, to a comprehensive legislative plan for flood control along the Sacramento River.\textsuperscript{22} This became the basis for the current system in which state and federal authorities share responsibility for flood control, including the maintenance of publicly owned “project levees.”\textsuperscript{23} Although many Delta levees are the result of these public works projects,
most of them were undertaken by private individuals and groups as part of their land reclamation activities, and are still privately owned and maintained.\textsuperscript{24} As will be discussed in Part III, this distinction between project levees and private levees continues to be legally important.

Plans for large water supply development projects began in 1930 with the State Water Plan, which became the basis for the Federal Central Valley Project (CVP), approved in 1933.\textsuperscript{25} The first major in-Delta diversion project was the Delta Cross-Channel in 1944.\textsuperscript{26} Because the goal of the CVP was to ensure a supply of fresh water, the canals and upstream dams were used to expel salt water from the Delta, turning the formerly brackish marsh into a salinity-controlled region.\textsuperscript{27} As water exports from the area increased, so did concern over salinity intrusion.\textsuperscript{28} In 1959, the Delta Protection Act\textsuperscript{29} set the legal boundaries of the Delta for the first time and required the water projects to maintain water quality standards.\textsuperscript{30}

As the growing state's water needs expanded, concerns about water quality and supply stability persisted, and plans for an isolated water conveyance facility that could solve this problem were considered from the time the large water projects began.\textsuperscript{31} These plans came to a head in the late 1970s and early 1980s with Governor Jerry Brown's proposal for a Peripheral Canal.\textsuperscript{32} Opposed both by environmentalists, who thought its water protection guarantees for the Delta were too weak, and Central Valley agriculture interests, who thought its protections for upstream rivers were too stringent to make economic sense, the proposal was soundly defeated at the polls.\textsuperscript{33} The issue of alternative Delta conveyance has been a political hot potato ever since, but has recently been back in the news as legislators try to grapple with the ramifications of today's deteriorating Delta system.\textsuperscript{34} In fact, a recent Public Policy Institute of California report concludes that constructing a peripheral canal is the best long-term strategy for managing water exports from the region when considering both environmental and economic objectives.\textsuperscript{35}

\textsuperscript{25.} \textit{Lund et al.}, supra note 8, at 32.
\textsuperscript{26.} Id.
\textsuperscript{27.} Id. at 33.
\textsuperscript{28.} Id. at 34.
\textsuperscript{30.} \textit{Lund et al.}, supra note 8, at 34.
\textsuperscript{31.} Id. at 35.
\textsuperscript{32.} \textit{Mark Reisner, Cadillac Desert} 363–64 (1986).
\textsuperscript{33.} Id.
\textsuperscript{35.} \textit{Jay Lund et al., Pub. Pol'y Inst. of Cal., Comparing Futures for the Sacramento–San Joaquin Delta} 123 (2008), available at \url{http://www.ppic.org/content/pubs/report/R_708EHR.pdf}. 
In the 1990s, lawmakers attempted to impose new governance structures and facilitate studies of the area. A second Delta Protection Act, in 1992, separated the Delta into primary (protected) and secondary (developable) zones, and created the Delta Protection Commission to analyze and regulate development in the Delta. In 1994, stakeholders agreed to the Bay-Delta Accord, creating the CALFED program to coordinate state, federal, and local agencies and stakeholders in forming a new strategic plan for the Delta. CALFED produced a Record of Decision in 2000, which noted that one of its goals was “to help local reclamation districts reconstruct all Delta levees to a base level of protection.” Bond funds helped CALFED achieve some of its goals, but most activities remain unfunded.

The public interests at stake in Delta policy decisions dictate that the state must come to some resolution about how to move forward. Today, the 738,000 acres of Delta land are protected by more than one thousand miles of levees. The benefits provided by the Delta are felt all over the state. Within the six counties that make up the Delta, land is used for urban development, agriculture, industry, recreation, and environmental preservation. Food grown on Delta land is eaten across the country. Water that passes through the Delta reaches more than twenty-five million people, serving agriculture throughout the Central Valley, and urban users as far south as San Diego, as well as being used within the Delta for urban, agricultural, and environmental needs. The state’s salmon population, important to both industry and several Indian tribes, is dependent on a healthy Delta for the critical migration season, and the endangered Delta smelt calls the Delta home. Critical infrastructure, including two interstate and four state highways, crosses parts of the Delta. Several rail lines and deep water shipping channels pass through the Delta, and two power plants are located along its western edge. Millions of people a year visit the region to enjoy its beauty and recreational opportunities.

36. CAL. PUB. RES. CODE § 29700 (2007); LUND ET AL., supra note 8, at 95.
37. LUND ET AL., supra note 8, at 38.
39. LUND ET AL., supra note 8, at 41.
41. LUND ET AL., supra note 8, at 4-5.
42. CAL. DEPT OF WATER RES., supra note 40, at 2, 5.
43. LUND ET AL., supra note 8, at 5.
44. Id. at 4.
45. Id. at 6.
46. Id. at 4.
47. Id. at 5-6.
More than one hundred years of trying to override the Delta's natural state has taken its toll on the environment, and changing conditions put the state's water supply and the Delta ecosystem at an increasing risk of collapse. Farming on the soft peat that makes up Delta land has caused significant subsidence. Many areas of the region that were protected by four-foot levees in the 1860s are now more than fifteen feet below sea level. Many of the levees were originally built with that same peat and other unstable materials, making them structurally fragile. Climate change threatens sea level rise, which will put more pressure on the levees that are keeping salt water out of the fresh water supply. This will make the weaknesses of the levees an even bigger danger going forward. It is important to note that major levee failure around the Delta would not just result in flooding of homes and farms; there would also be a twofold water pollution effect. First, sea water will mix with what is supposed to be the state's fresh water supply. Second, when land is flooded, contaminants that had been trapped in the soil will become mixed in with the water flowing through the Delta. Some of these contaminants will be man-made, such as fertilizers from agricultural use. Additionally, land in the Delta that was once marshland has a natural tendency to produce methylmercury, which means that mercury contamination could become a serious problem.

Besides the potential dangers of levee breaks to the environment and the reliability of the state's future water supply, there are current problems of water supply that are greatly impacting the region and the state as a whole. The current acute crisis is that the huge pumps pushing water out of the Delta for export are suspected as part of the reason for a precipitous decline of several fish species. The Department of Water Resources (DWR) recently conducted a temporary shutdown of the pumps in response to a court order to protect the Delta smelt, which is listed as an endangered species. This has led to significant reductions in deliveries to water agencies normally dependent on the Delta for supply.

48. Id. at 4–8.
49. Id.
50. State Lands Comm'n, supra note 20, at 69.
51. CALFED, supra note 6, at 3.
55. Weiser, supra note 53.
Climate change concerns reach beyond the levees to predicted effects on water supply and quality in the Delta. Scientific research suggests that regional changes in temperature will change future precipitation and runoff patterns. This will lead to more flooding and a less steady water supply, exacerbating the supply problems faced in both wet and dry years. Evidence suggests that these changes will also adversely affect water quality in the Delta. Unfortunately, climate change has been a difficult political issue, so this evidence has not always been incorporated into policy discussions.

In addition to the significant environmental and water supply concerns, the potential for a natural or man-made disaster to adversely affect residents of the Delta is very high. The levees are not seismically sound, and have been known to fail on sunny days free from earthquakes. The extreme fragility and interconnectedness of the system means that a major levee break could lead to a disaster reminiscent of Hurricane Katrina. It also makes the area extremely vulnerable to attack.

While the Delta region itself may not seem large or populated enough to be politically significant, a breakdown in the water supply would at least temporarily jeopardize much Central Valley agricultural production, as well as most drinking water in the largest metropolitan areas of the state. Thousands of homes and businesses could be lost in

56. LUND ET AL., supra note 8, at 59.
57. Id. at 53-54.
58. Id.
59. Although there has been progress on this front in California, there are still political barriers to addressing climate change. Recently, Assembly Republicans vowed to oppose a bill, A.B. 2501, Reg. Sess. (Cal. 2008), which would have imposed a duty on DWR and other water management agencies to consider climate change in all state water management plans, partially because the Republican Caucus disputes that the science of climate change is conclusive.
62. See LUND ET AL., supra note 8, at 8.
63. Id.
64. Id. at 17.
the subsequent flooding. It would also take a long time and large amounts of money to recover from this sort of damage because of the major infrastructure repairs that would be needed and the substantial proportion of the state that would be affected. Thus, the public interest in clarifying the legal rights underlying property ownership in the region is very large.

B. ATTEMPTS AT SOLUTIONS

One of the difficulties in managing the region is the large number of governmental and private parties involved. The CALFED program was seen as a solution when it was inaugurated in 1994 as a result of the Bay-Delta Accord. Its goal was to involve all the relevant state and federal agencies, as well as local and statewide stakeholders, in determining improvement strategies for the levees, water quality, water supply reliability, and ecosystem restoration. A main structural problem with the program was that the new agency was not set up with a stable, long-term funding structure. Although progress was made in some areas, including research and ecosystem restoration upstream of the Delta, after more than ten years it is now clear that the CALFED program has failed to get the agencies to work together to find comprehensive solutions to Delta issues.

In 2006, Governor Schwarzenegger assembled a Blue Ribbon Task Force to study the Delta and devise recommendations for addressing the various problems in the region. The resulting report, entitled Delta Vision: Our Vision for the Delta, set out a list of twelve “integrated and linked recommendations” that the Task Force found were necessary to consider in order to achieve a solution. These include holding the ecosystem revitalization and a reliable water supply as “primary, co-equal goals,” giving the Delta “special legal status,” keeping reasonable use and the public trust as the “foundation for policymaking,” and designing “institutions and policies...for resiliency and adaptation.” This is explicit acknowledgment that the current legal system as it relates to the Delta is insufficient, but that any new policies must be based on

65. Id. at 8.
66. Id. at 38.
67. Id. at 38–39.
68. Id. at 40–41.
69. Id. at 41.

72. Id. It is interesting to note that, although the Task Force emphasizes the public trust, it refers almost exclusively to the public trust interest in water resources, rather than land resources. Cf. discussion infra Part II.B.2.
those existing principles that have been most effective in protecting California's water resources. The Delta Vision report provides a clear set of priorities with which to move forward in planning for the Delta's future.73

II. THE LEGAL LANDSCAPE

Stakeholders in the Delta region hold both water and real property rights. Although the discussion around the Delta has historically been centered on water supply, quality, and rights, land use decisions are inextricably tied to water issues in the region.74 Thus, in looking for ways to effect change, it is critical to examine both water and real property rights in the Delta.

A. Property Rights: Water Law

Water rights are unlike most other property rights in that they are usufructuary. This means that a water rights holder does not own the water itself, but rather owns only the right to use a particular amount of water.75 This quirk of water law is a result of the traditional idea that water is a public resource, and it leads to water rights being subject to some unusual limitations. Because water is transported through the Delta to users in much of the state, many stakeholders in Delta negotiations do not live in the region. This often leads to conflicting preferences and priorities among concerned parties regarding policies that affect the Delta. A brief primer on water rights will help clarify some of the legal backdrop.

1. Ways to Acquire Water Rights

Water rights in California can be acquired in several different ways, and how the right is acquired determines the priorities of the rights holders in relation to each other.76 Holders of rights to water passing


74. See LUND ET AL., supra note 8, at 197.

75. BLACK'S LAW DICTIONARY 1580 (8th ed. 2004).

76. This arrangement is further complicated by the fact that surface and groundwater are treated as completely separate systems, each with its own hierarchy of users. The legal separation of ground and surface water is artificial and often impractical because the two are closely linked hydrologically. This has been acknowledged to some extent in the context of water transfers, but legally the two systems remain almost entirely separate. The rules explained here are those applicable to surface water, because groundwater is not directly a large part of the Delta controversy. See generally City of L.A. v. City of San Fernando, 537 P.2d 1250, 1250-54 (Cal. 1975) (laying out the general principles of groundwater rights).
through the Delta may have acquired those rights through owning riparian land, appropriation, or purchase of a water transfer, resulting in rights holders being located both within and far from the Delta itself.

In general, first priority goes to owners of riparian land who can take the water directly from the waterway for use within the watershed. Riparian rights are correlative in that all riparian rights holders have "equal rights to use the water passing through or by their property." Appropriative rights are next in line, with appropriators ranked by a "first in time, first in right" rule. Under this "prior appropriation doctrine," these rights are not correlative, in that each earlier appropriator has the right to as much water as it can use before the next appropriator has a right to any water.

Water transfers, or the sale of water rights, are limited by "area of origin" statutes, which restrict transfers outside the water basin in which the seller's rights originate. The Delta Protection Act is one of the most comprehensive of these statutes. It guarantees maintenance of "an adequate water supply in the Delta," and curtails water exports from the region that would interfere with the needs of in-Delta users. Water transfers allow water rights holders to make market-based decisions about the economic efficiency of using their water themselves versus selling their water to other parties in need of additional supply.

2. The Reasonable Use Doctrine

All water rights in the Delta, indeed in the entire state, are subject to the reasonable use doctrine. This doctrine has been a fundamental part

77. See generally Anaheim Union Water Co. v. Fuller, 88 P. 978, 981 (Cal. 1907) (laying out the general principles of riparian rights). Riparian rights holders may take as much water as they can reasonably use on their land at any time, and this amount can change over time. This leads to the phenomenon of "unexercised" riparian rights that, especially when combined with the appropriative system, can lead to significant uncertainty about how much water is available in the system for use by various parties. The problem of uncertainty led the California Supreme Court to allow relegation of these unexercised riparian rights to the bottom of the priority hierarchy, thus avoiding the problem of future new riparian use disrupting established appropriative use. In re Waters of Long Valley Creek Stream Sys., 599 P.2d 656, 664-65 (Cal. 1979).


79. See generally Irwin v. Phillips, 5 Cal. 140, 147 (1855) (recognizing and explaining the prior appropriation system).

80. BLACK'S LAW DICTIONARY 1231 (8th ed. 2004). Because the priorities of appropriative rights holders are determined based on the date of first use, the right extends only to the amount originally appropriated. Thus, if an appropriator with senior rights wishes to expand its water use, it may appropriate more water, but its rights to the new appropriation will be junior to any appropriators who may have gained rights in the meantime. This makes the prior appropriations system stable and predictable in terms of the relative relations of parties using the water.


83. Gray, supra note 81.

84. CAL. WATER CODE §§ 12201, 12204.
of California's water resources law for more than one hundred years. The courts have recognized it to varying degrees since statehood, and it was explicitly incorporated into the California Constitution in 1928, in Article X, section 2. That section provides:

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 use 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.

It goes on to say that the right to water only extends to its reasonable use. Consequently, any unreasonable use is not included in the water right. This means that regardless of how a party obtains water, be it through owning riparian land or appropriation, the right to use that water applies only as long as the water is used in a reasonable manner as determined by the courts. If water is being used unreasonably, there is no right to use it. Because no right in the water exists, prohibiting a party from using that water does not deprive the party of anything for which compensation would be required.

Application of the reasonable use doctrine is understandably controversial, as it completely circumvents any takings claims that might be available to a party who could otherwise claim existent rights. It is also, therefore, a very powerful tool which can give parties strong incentives to change their use patterns voluntarily. For example, in 1980 the Imperial Irrigation District was found to be complicit in the unreasonable use of water through inefficient irrigation practices. The district appealed the decision, but instead of waiting for a final finding, it went forward with plans to conserve water and sell it to the Metropolitan Water District, thus preserving its water rights. It is unlikely that this agreement would have been reached without the threat posed by the reasonable use doctrine. Because the doctrine applies to a user of water in relation to the water's use, it necessarily applies at the place of use,

86. Id.
88. Id.
89. Id.
90. Id.
92. Id.
93. This is a much simplified account of an extremely complicated and drawn-out negotiation process. See id. (describing these events more completely).
94. Id.
even if far removed from the water’s original source. This means that the doctrine may positively affect the Delta by providing an incentive to conserve to water users all over the state.

B. Property Rights: Land

Land in the Delta is subject to some unusual legal influences as a result of its tangled history. First, in addition to the standard variety of zoning restrictions imposed in most U.S. jurisdictions, land in the Delta is separated into "primary" and "secondary" zones. Land in the primary zone is the lowest and most subsided, and is mostly restricted to agricultural, environmental, and recreational use, while land in the secondary zone may be further developed. Second, as has been described, original acquisition of real property in the Delta was mostly through sale by the state to parties willing to "reclaim" the land. The origin of these property rights leads to some potential restrictions on land use. Finally, application of the traditional legal concepts of the public trust and eminent domain to land in the region lead to some peculiar results. The application of zoning restrictions, though important to property rights in the Delta, is legally straightforward. In contrast, the effects in the Delta of land reclamation, the public trust doctrine, and eminent domain require some explanation.

1. Reclamation

When California became a state, it automatically gained title to tidelands and submerged lands under the equal-footing doctrine. The federal government had retained title to most marshlands in the nation until Congress decided to grant those lands to the states to encourage more efficient reclamation. This distinction between state tidelands and federal marshlands is important because it creates a legal difference between the two types of land. The federal grant was made with the specific purpose of land reclamation. In 1873, the California Supreme Court held in Kimball v. Reclamation Fund Commissioners that a private owner was presumed to have taken title with "full knowledge of the terms, conditions, and purposes on and for which the grant to this state was made by the Federal Government." He "accepted the title in subordination to the paramount right and duty of the State to cause the land to be reclaimed," and his title was "subject to the right of the Legislature to modify the then prevailing system of reclamation." Thus,
the private owner did not have the option of letting his land flood, and could be made to pay for and construct a levee. This means that a property right to marshland derived from the federal land grant carried a restriction on its use, in that the State could dictate a particular mode of reclamation to be carried out.

2. The Public Trust Doctrine

Real property in the Delta is interesting in its potential relation to the ancient public trust doctrine. The public trust doctrine has its origins in Roman law, and was part of the concept of common property. The rivers, sea, and seashore were not capable of being privately owned, and were intended solely for public use. Later, under English law, the idea was expanded to hold all navigable waterways and submerged lands for the public trust. This concept has survived and evolved through history and is now firmly established as part of national and California common law. In 1892, the United States Supreme Court explicitly acknowledged the doctrine in Illinois Central Railroad Co. v. Illinois, holding that public trust lands are not fully alienable. While the government may lease or "sell" public trust land, it is always subject to the public's interest.

Traditional uses permitted by the public trust doctrine are navigation, commerce, and fishing. This list has been expanded in the past century to include recreation and environmental preservation. California has a particularly broad definition of what is encompassed by the public trust. It includes tide and submerged lands, and its definition of navigable waterway includes any water that may be traversed by a raft, which brings in many areas that would not be considered navigable by other states.

California courts have also been especially generous with what is considered an appropriate public trust use. In 1971, the California Supreme Court held in Marks v. Whitney that the doctrine was flexible and "is not burdened with an outmoded classification favoring one mode of utilization over another." Although little noted at the time, this case

102. Id. at 363–64.
103. Although the public trust doctrine is applicable to property rights in both water and land, see, e.g., Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 711–12 (Cal. 1983), its application to real property rights is particularly interesting in the Delta.
104. J. INST. 2.1.1.
106. 146 U.S. 387, 452–53 (1892).
107. Id.
109. See id.
111. 491 P.2d at 380.
was the first explicit recognition that environmental preservation was an appropriate public trust use. Practically speaking, this was a significant opening that paved the way for a huge expansion of the doctrine twelve years later in *National Audubon Society v. Superior Court*. There, the court held that the doctrine required ongoing supervision of the public trust, and that any grant of water or public trust land by the state may be changed or revoked in light of new circumstances relating to the public trust.

It has long been settled that public trust lands may be leased and built on by private entities as long as public trust uses are being promoted. For example, wharves, warehouses for railroads, and facilities for visitors are permissible because they directly encourage the public trust uses of navigation, commerce, and recreation. These private uses are subject to the public trust, so the land grants are not absolute. The result is that, in terms of the "bundle of sticks" that comprises the property rights of the private party in the public trust land, a big condition is put on the "right to use" stick: the use must comply with the public trust. This seems straightforward enough, but when the flexibility of the public trust to encompass changing public needs is superimposed on that requirement, the property right suddenly becomes quite fragile. This, in turn, leads to questions of fairness and reliance interests of the private parties when those public needs change.

A further twist came in 1913 when the California Supreme Court in *People v. California Fish Co.* held that, although it is possible for the state legislature to completely give up title to public trust lands, it can only do so with explicitly expressed intent while acting within its public trust duties. There, the court found the sale of marsh and tidelands to be an easement subject to the public trust because the legislature did not evidence enough intent to abrogate the public trust in the sale. Because the property at issue was not in the Delta, and had never been used or intended for reclamation, this case does not by itself settle the issue for Delta lands. One important thing the case does mention, however, is that if the state wishes to completely take back land that had been "sold" but was still subject to the public trust, the landholder must be compensated. In *City of Berkeley v. Superior Court*, the court similarly

112. *Id.*
114. *Id.* at 728.
116. *See id.*
117. *Id.*
118. 138 P. 79, 88 (Cal. 1913).
119. *Id.*
120. *Id.* at 81–82.
121. *Id.* at 88.
found that a sale of tidelands did not convey title free of the public trust doctrine because the legislature lacked the requisite clear intent.\textsuperscript{122} In that case, since there had been some intervening contradictory case law after \textit{California Fish Co.}, the court further held that its rule would apply retroactively only to tideland that might still be physically adaptable to public trust uses.\textsuperscript{123}

A final case illustrative of the nuances and potential flexibility of the public trust doctrine as it applies in the Delta is \textit{Bohn v. Albertson}.\textsuperscript{124} That case involved a tract of land in the Delta that flooded, and instead of reclaiming it, the owners chose to charge admission for people to come use the waters for fishing and other purposes.\textsuperscript{125} The court found that while the landowners did not lose their title to the land, and could choose to reclaim it at any time, as long as it was covered by navigable water it was subject to the public trust and must be free and open to the public.\textsuperscript{126} A key detail to note from this case is that the court found a reserved public trust interest on the land, regardless of whether or not it had navigable water on it at the time of patenting.\textsuperscript{127} Rather, the determining factor in this case was whether a piece of land contained navigable water at any given moment in time.\textsuperscript{128} If it did, that water was subject to public trust access.\textsuperscript{129} This sweeping rule is limited by maintaining in the property owners the right to reclaim the land and remove it from the public trust use at any time.\textsuperscript{130} Given the weakness of Delta levees and the resulting propensity of the islands to flood, \textit{Bohn} raises the interesting possibility that even land not already subject to the public trust doctrine may, in times of disaster, become subject to it.

According to the State Lands Commission, it is the legislature that holds ultimate control over public trust lands, subject to judicial review.\textsuperscript{131} It may "create, alter, amend, modify, or revoke a trust grant" in order to ensure that public trust lands are used in a manner suitable to the needs of the public.\textsuperscript{132} Because of this, any comprehensive change or clarification to public trust uses in the Delta region should ideally come from the legislature. While the courts could certainly rule on public trust

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\textsuperscript{122} 606 P.2d 362, 370 (Cal. 1980).
\textsuperscript{123} \textit{Id.} at 373–74.
\textsuperscript{125} \textit{Id.} at 129.
\textsuperscript{126} \textit{Id.} at 135–36.
\textsuperscript{127} \textit{Id.} at 131.
\textsuperscript{128} \textit{Id.} at 135.
\textsuperscript{129} \textit{Id.}
\textsuperscript{130} \textit{Id.}
\textsuperscript{131} \textsc{STATE LANDS COMM’N, THE PUBLIC TRUST DOCTRINE} 13 (2001), available at http://www.slc.ca.gov/Policy_Statements/Public_Trust/Public_Trust_Doctrine.pdf. The State Lands Commission has jurisdiction over all tide and submerged lands in the state. \textsc{CAL. PUB. RES. CODE} § 301 (2001).
\textsuperscript{132} \textsc{STATE LANDS COMM’N,} supra note 131.
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uses, legislation will be seen as more legitimate and can be more nuanced and region-specific.\textsuperscript{133}

3. \textit{Eminent Domain}

California's version of eminent domain is embodied in the California Constitution as Article I, section 19. That section states in part, "[p]rivate property may be taken or damaged for public use only when just compensation . . . has first been paid to . . . the owner."\textsuperscript{134} In \textit{Paterno v. State}, an appeals court found the state liable to flood victims, even if it had not built the levees, when it has accepted and operated them as its own.\textsuperscript{135} At issue in \textit{Paterno} was whether the state had an unreasonable flood control plan that resulted in damage to the plaintiff's property.\textsuperscript{136} The state argued that maintenance of the failed levee was not part of a plan, and therefore the damage to the plaintiff's property did not constitute a taking for the public good.\textsuperscript{137} The court found that there was a flood control plan, and because its purpose was for the public good, any disproportionate damage to an individual's property was a compensable taking.\textsuperscript{138} Because flood protection projects serve a public good, the court declined to apply strict liability.\textsuperscript{139} Instead, a balancing test determines whether a taking has occurred, and the benefits served by flood control are weighed against the damages to the landowner.\textsuperscript{140} Specifically, the court looks to feasible alternatives, potential disincentives for future projects, and fair distribution of costs, among other factors.\textsuperscript{141}

The \textit{Paterno} decision opens the state up to liability for potentially vast amounts of money because it gives the state responsibility for all levees that it has incorporated into a unified public flood control system and maintained. However, it does not apply directly to privately maintained levees, which make up the majority of levees within the Delta. It also does not dictate that a decision by the state to enforce a public trust use of former tideland by allowing certain levees to fail would necessarily result in a takings claim. If the land at issue is subject to the public trust doctrine, the state has the right to change its use in light of changing public needs.\textsuperscript{142} It is also not obvious that the \textit{Paterno} analysis would be the same in the context of reclamation levees as

\textsuperscript{133} A small part of the public trust doctrine is already explicitly guaranteed by the California Constitution, which limits the sale of certain tidelands and mandates public access to navigable waterways. \textit{Cal. Const.} art. X, §§ 3–4.

\textsuperscript{134} \textit{Id.} art. I, § 19.


\textsuperscript{136} \textit{Id.} at 857.

\textsuperscript{137} See \textit{id.} at 862.

\textsuperscript{138} \textit{Id.} at 875–76.

\textsuperscript{139} \textit{Id.} at 867–68.

\textsuperscript{140} \textit{Id.}

\textsuperscript{141} \textit{Id.} at 876–77.

\textsuperscript{142} \textit{Marks v. Whitney.} 491 P.2d 374, 380 (Cal. 1971).
opposed to flood control levees. Thus, although it is clear that in some cases state failure to maintain levees will result in takings claims, the legal landscape of eminent domain in the Delta has not been fully explored.

III. A CONUNDRUM AND SOME CONSIDERATIONS

The history of land reclamation in the Delta raises several legal questions. The fundamental problem is that there are no accurate maps of what was originally tideland and navigable waterways in the area.\(^{143}\) According to the State Lands Commission, most of the early land surveys were hampered by the difficulty of traveling over wetlands, and were subject to the whims of some notoriously unreliable surveyors.\(^{144}\) The particular topography of the area, which blended marsh and tideland, further complicates matters.\(^{145}\) Because the nationwide federal grant of marshland to the states happened almost simultaneously with the vesting of rights to tideland in California pursuant to statehood, it seems that initially no systematic effort was made to distinguish between the two kinds of land; it was all going to the state regardless.\(^{146}\) Consequently, it may be impossible to figure out exactly what Delta land was originally state tideland (and consequently subject to the public trust) and what was federal marshland (free from the public trust).

This fact, combined with the previously discussed result in *Kimball*, leads to several questions. First, assuming that within the Delta some of the reclaimed lands included public trust land, can the intention of Congress have been to specifically abrogate the public trust of Delta lands? This seems unlikely, given that in the vast majority of cases the geography covered by the federal legislation granting the land to the states would not have been ambiguous. However, the strongly expressed national policy of converting marginal land to productive agricultural areas may lead to the opposite conclusion. If so, how does the *Illinois Central Railroad Co.* decision nineteen years later interact with the

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143. Interview with Paul D. Thayer, Executive Officer, State Lands Comm'n, in Sacramento, Cal. (Feb. 2, 2008).
144. *Id.*
145. The *Marks* court defines tidelands for that case as including “the shores of bays and navigable streams as far up as tide water goes and until it meets the lands made swampy by the overflow and seepage of fresh water streams.” 491 P.2d at 380. The court had earlier embraced a flexible definition in order to protect the public welfare. *San Pedro, L.A. & San Leandro R.R. Co. v. Hamilton*, 119 P. 1073, 1076 (Cal. 1911) (construing “tidelands” “more broadly than in the ordinary signification of lands covered and uncovered by the daily efflux and reflex of the tide” and including submerged lands).
146. Federal and state surveyors did assess the extent of swamp and overflowed land in the state, but “[a] line was drawn around the Delta for future state determination if these islands were swamp and overflowed land, tide and submerged lands or uplands.” *State Lands Comm'n, supra* note 20, at 2–3. This determination was apparently never made, and land sold in the area included tide and submerged lands, which would have been subject to the public trust doctrine. *Id.* at 3.
Kimball decision in regards to those public trust lands? In Illinois Central Railroad Co., the railroad company had reclaimed some land from a harbor in Lake Michigan under a contract with the local government, but the Court found that did not give the company the land in absolute fee because the land was permanently subject to a public trust easement.147

Illinois Central Railroad Co. proposes that the state legislature can change its policy regarding appropriate use of public trust land, and that title is not perfected when public trust land is reclaimed. This leaves open a question from Kimball about whether a state can ever reevaluate a land use decision made by the federal government in its land grant, especially in light of potential ambiguity regarding the extent of that grant. Due to the impossibility of knowing the exact extent of the federal land grant, as distinct from the state tidal lands, it would seem unreasonable to hold the entire region hostage to a purpose that no longer served the public’s best interest.148

If it can be proven that a particular piece of land was originally marshland, there may be a question about whether current landowners are still bound by the intent of the original federal grant, as the defendant in Kimball was, or whether they can let it revert to marshland while still retaining their title.149 However, because the origin of most Delta land remains ambiguous, if a new use complies with a current statement of policy for public trust land, it would seem that the combination of Illinois Central Railroad Co., which prohibits abrogation of the public trust, and Marks, which directs the state to protect evolving public trust uses, should effectively override Kimball in the Delta.

Another area requiring clarity is the applicability of the City of Berkeley retroactivity rule to Delta land that has been reclaimed. If it was originally subject to the public trust doctrine, the rule in that case would mean that reclaimed land would only be subject to the doctrine if it was still capable of being physically adapted to public trust uses. In City of Berkeley, the court found that “[p]roperties that have been filled . . . are free of the trust to the extent the areas of such parcels are not subject to tidal action, provided that the fill and improvements were made in

148. The Court in Illinois Central Railroad Co. rejects using tides as a measure of the extent of the public trust doctrine as it justifies extending the doctrine to inland lakes. Id. at 436. However, even if the federal test would not extend to the tidelands of the Delta, which is debatable, the California test is much broader, and definitely includes tidelands within public trust protections. Marks v. Whitney, 491 P.2d 374, 380 (Cal. 1971); see Nat’l Audubon Soc’y v. Superior Court, 658 P.2d 709, 719–20 (Cal. 1983); see also State v. Superior Court, 625 P.2d 239, 251 (Cal. 1981) (embracing a broad application of the public trust). Also, the Audubon decision shows that navigable waterways can be protected by the public trust from harm caused by the effects of connected, non-navigable waterways, which suggests that at least all Delta waterways are included. 658 P.2d at 721.
149. Bohn seems to imply that they can at least leave it so flooded that it is available for a public trust use, although it is unclear whether that would extend to flooding just enough to provide marshland habitat that would not be considered public trust land to begin with. 238 P.2d 128, 135 (Cal. 1951).
accordance with applicable land use regulations." There is an argument that this leads to the rule that any land in the Delta that has been reclaimed is now free of the trust. However, the land contemplated by this statement in City of Berkeley was shoreline that was completely filled and incapable of restoration to any public trust use. In contrast, much of the reclaimed land in the Delta has been drained, but not filled. While certainly that land has been "improved," it is not incapable of being restored to a public trust use, as evidenced by the transformation of some land in the area back to wetlands preserves. The court noted that:

In the harmonizing of these claims, the principle we apply is that the interests of the public are paramount in property that is still physically adaptable for trust uses, whereas the interests of the grantees and their successors should prevail insofar as the tidelands have been rendered substantially valueless for those purposes.

Inasmuch as this standard potentially conflicts with the one set out above as they apply to reclaimed land in the Delta, the issue is unsettled. As these cases point out, there are questions that must be answered before any effective land use policies can be implemented in the region. Because the case law is unclear in its particular application to the Delta, the best way to answer most of these questions is through carefully thought-out legislation. The legislative process has the advantage of allowing stakeholder comments and concerns to be heard publicly, as opposed to the limited public contribution usually available in a judicial proceeding. This public process is critical, because whatever the eventual solution, it is clear that stakeholders will come out of the process with altered legal rights. Interested parties must feel that the system is equitable, taking into account reasonable reliance interests and acknowledging the need for efficient uses of Delta resources by all involved. Change can be frightening in the best of situations. In the Delta, change will surely have costs, including some dislocations, but most parties have the ability to adapt. A fundamental part of planning for and encouraging change in the Delta will be establishing a system that facilitates fair distribution of costs among those involved.

150. 606 P.2d 362, 373 (Cal. 1980).
151.  Id.
152. Interestingly, a recent court of appeal decision states that even the filling of tideland does not remove it from the public trust. Zack's, Inc. v. City of Sausalito, 81 Cal. Rptr. 3d 797, 808 (Cal. Ct. App. 2008). The court cites a 1970 case in which the California Supreme Court analyzed the constitutional provision regarding alienation of tideland.  Id. (citing City of Long Beach v. Mansell, 476 P.2d 423, 435 (Cal. 1970)). This highlights the ongoing uncertainty in the area. See United States v. 11,037 Acres of Land, 685 F. Supp. 214, 216 (N.D. Cal. 1988) (stating, confusingly, that City of Berkeley does not apply when there has been no legislative intent to free the land from the public trust).
153. See LUND ET AL., supra note 8, at 207, 216.
154.  Id. at 203–05.
155.  Id. at 209–10.
IV. A Proposal

Because the current system governing the Delta grew haphazardly out of the intersection of many competing and interrelated forces, it is ineffective in allowing a coherent change in policy that can balance all the interests involved in an equitable way. Rather, it is mired in the status quo, with each stakeholder afraid to compromise for fear it will end up paying more than the next party. The problem is that nature will not allow the status quo to stand. This reality of changing natural conditions makes finding an equitable solution urgent. If California waits until the system collapses, everyone will surely lose more than if a compromise is reached now.

Given that changes to property and water rights ownership will be necessary to achieve whatever solution is decided on, a legal framework must be in place that will facilitate efficient and fair transfers of rights. This should be brought about by legislation that is broad and overarching, and that sets out a clear state policy in favor of stability in both the ecosystem and the water supply. Recently contemplated legislation deals with specific changes to things like agency jurisdiction and funding for studies. While these are valuable and perhaps necessary changes, they avoid the issue of how to apportion the costs of significant physical changes to the Delta. That requires lawmakers to take a step back from the specifics, and decide how best to balance the public interests against private property rights in this context. Currently three main options are available to the state to prompt transfers of the property interests at stake in the Delta. Each of these is insufficient on its own to effect the necessary changes, so a middle way is needed that will fairly balance the needs of all parties involved.

Traditionally, eminent domain has been the tool available to the government for forcing the transfer of private property. It is not an ideal tool in this situation for several reasons. First, it is not clear that all property transfers would be to the state. It is possible the most efficient disposition of a particular piece of property might be from one private party to another. While under Kelo v. City of New London the government can require the transfer of private property to another private party as long as it is for the public good, it may be difficult to make the broad public good case for each small transfer that might be necessary in the Delta, absent some specific policy articulated in legislation. Second, using unadulterated eminent domain to try to address all the problems in the Delta would be unnecessarily expensive.

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156. This general principle is recognized by the Blue Ribbon Task Force in its Delta Vision Strategic Plan in 2008. See BLUE RIBBON TASK FORCE, supra note 73, at 57.
because potential application of the public trust and reasonable use doctrines would tend to imply a lower price for the transfer of rights than eminent domain alone would call for. Eminent domain would also be prohibitively cumbersome as it could entail large numbers of independent proceedings dealing with varying kinds of property rights and owners.

The reasonable use doctrine is a potentially very powerful tool in reapportioning water among users, but it has two shortcomings that make it of limited use in reorganizing the Delta. First, it only applies to water rights, and therefore can only be of indirect help bringing about the land use changes that will be necessary. Second, it is a very blunt instrument in that once a finding of unreasonable use is made, the user must give up the water without any compensation. This concept is an important and useful one to have and should remain available, but given the complicated history of the Delta and the reliance interests that have built up for more than a century in some cases, it would be inappropriate to use on a large scale in this setting.

The third property transfer system in place is the free market. This is often perceived as the fairest system in that, unlike the use of eminent domain or a finding of unreasonable use, it presumes willing buyers and sellers. However, it too has limitations, especially in the Delta context. First, it concentrates power in the hands of those with money to spend and resources to sell. If every party had one of these two things it might possibly work, but unfortunately, in the Delta this is not the case. There are communities, including Indian tribes, which depend on Delta resources but that do not have the money to purchase, for example, the right to guaranteed water flow.

Furthermore, the ecosystem itself needs to be considered a party with interests in the future of the Delta. While there are private conservancies and NGOs working effectively on behalf of environmental preservation, they are necessarily working on particular small areas of the ecosystem. The enormous potential impact of a Delta collapse requires a way to guarantee that the ecosystem can be managed in a coherent, comprehensive way. Exclusive use of the free market system will likely result in an inefficient patchwork of protected and unprotected areas. In order for government participation to be widespread enough to make up for these shortcomings, the free market could be a prohibitively

159. The Delta Vision Strategic Plan proposes strategies for market incentives, but it focuses on opportunities within the agriculture industry rather than on using the free market to address the transfer of property rights. See Blue Ribbon Task Force, supra note 73, at 62. The Delta Vision Committee report endorses the idea of establishing "market incentives and infrastructure to protect, refocus, and enhance the public values of Delta agriculture," but does not address the area with specificity. Delta Vision Comm., supra note 73, at 16.
expensive solution.\textsuperscript{160} If eminent domain were completely ignored in favor of the free market, the state could incur higher costs, for example in situations of individual holdouts owning critical water rights or pieces of land.

These three systems of prompting property transfers can be thought of as the three points of a triangle. Each has advantages and disadvantages, so a potentially workable solution may be found in the middle, avoiding the extremes and emphasizing compromise. This middle way should have the public trust doctrine as its base and incorporate the flexibility of the free market, the notion of reasonable use of resources, and the concept of compulsory compensation to private parties for the public good if it is appropriate in a particular situation.

Recently, environmental groups threatened to file suit against the State Water Resources Control Board to force the Board into more aggressive use of the public trust doctrine in its permitting processes.\textsuperscript{161} While it would certainly be a step in the right direction for the Board to follow the \textit{Audubon} court's mandate to take public trust issues into account in its decisions, this suit will not be enough to bring about comprehensive change in the Delta. A legislative solution is preferable because of the potential for integrated regional rulemaking and for avoiding the legitimacy issues that any sweeping court-ordered decision could have.

While accurate surveys of the undeveloped Delta at the time California became a state do not exist, it is generally understood that most of it was subject to daily tides, and all of it was subject to seasonal tides and river flooding.\textsuperscript{162} This means that all of the Delta lands could have been subject to the public trust doctrine. Under \textit{Illinois Central Railroad Co.}, although public trust land can be given to private parties, it always retains its public trust nature. Thus, if the state finds that the public good requires a change in priorities regarding Delta land use, it should be able to use the public trust doctrine in enforcing that change. While it may be possible to do this without legislation, a specific, articulated vision from the legislature about how, where, and why the public trust doctrine should apply would result in fewer legal challenges and reassurance to the public that the policy change will be comprehensive and applicable to all parties. It would also clear up any doubts regarding the land reclaimed under state and federal law, because

\textsuperscript{160} Additionally, some legislative proposals would ban the use of eminent domain in certain Delta actions. See S.B. 1108, 2007-08 Reg. Sess. (Cal. 2008).


162. \textit{See Lund et al.}, \textit{supra} note 8, at 19.
under *Audubon*, if land is subject to the public trust doctrine, the state can alter its use according to the changing needs of the public. At the time of reclamation, the public good was best served by draining the land for agricultural purposes, but today the public good might be better served by allowing some of that reclaimed land to return to its original tidal marsh state.

Basing legislation on a clarification of the public trust doctrine as it applies to the Delta has the advantages of reaching all users of the Delta at once and articulating a standard by which to judge what qualifies as a public good in the region. While at first it may seem to leave out those parties who do not have land interests in the Delta, it will also reach those water users who are not located in the region. Because water export from the region is dependent on some form of Delta land use for the physical transfer of water, the public trust doctrine would require that use to be consistent with public trust values, including that of protecting the environment.

Additionally, a clarification of the public trust doctrine as it applies to the Delta would encourage free market forces to work more efficiently in the area. Even if the legislation is challenged, a clear policy statement from the state would result in a changed atmosphere for negotiations. As in the Imperial Irrigation District settlement that arose out of reasonable use challenges, if land users know that their property rights may be subordinate to the public trust they may be more willing to make changes that make them less vulnerable to state action against them. For landowners within the Delta, these could include being more willing to sell their land and/or water rights to conservation groups, changing their own land use practices to reduce subsidence, changing irrigation practices to improve efficiency and reduce pollution, deciding not to develop land that has a severe risk of flooding, and selling water for export that would otherwise be used on the assumption that their property right in the land was unencumbered. For water exporters, this would encourage more careful consideration of local effects from their water use, and could result in more voluntary water conservation, and a willingness to contribute more to environmental mitigation and disaster preparedness efforts.

Although this would be a difficult political position, realistically every proposal for fundamental change in the Delta is politically difficult. It may be easier for the legislature to avoid controversial issues, but the risks of Delta collapse are so great that the costs of not acting, both political and financial, surely outweigh the temporary discomfort that an

163. 658 P.2d 709, 719 (Cal. 1983)
164. See *Audubon* for a discussion of how the public trust doctrine applies to water users' effects on land. *Id.*
ambitious proposal will entail. A solution will necessarily address multiple issues, but one part of Delta reform legislation should be a clear legislative statement that the entire Delta is subject to the public trust doctrine.

CONCLUSION

The Delta is today at once California’s greatest resource and its greatest problem. Because of the tangled history of the region, it is critical that state leaders and citizens engage in a comprehensive public discussion about all the costs and benefits of the current system, and how to move toward change in an equitable and efficient manner. We must acknowledge that fixing the Delta will necessarily result in the modification of some property rights, which makes the public nature of the legislative process a tool of utmost importance. The unique nature of the region and how it came to be developed presents a unique confluence of property doctrines that should be used to help come to a resolution. A legislative clarification that the public trust doctrine extends throughout the Delta will encourage all those involved to regard their own interests in light of the public good. It will not dictate results, but it will facilitate movement in an area that has come to seem intractable. In this way, it will help to preserve the jewel that has indeed been as valuable to California as if the water flowing through it was nectar, and the rocks pure gold.
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