Abstract

This case study discusses the implications of imposing the doctrine of public trust to ground and surface waters within the State of Hawaii and its effects on traditional rights that had previously evolved based on common law. It traces the major events of the history of water rights and practices beginning with the system devised by the indigenous Hawaiian people prior to the adoption of the doctrine of public trust to the water resources of the State of Hawaii, applied with the most expansive interpretation of the public trust doctrine, encompassing both surface and subsurface waters and a wide assortment of protected uses and purposes. The major decisions that ensued when applying the doctrine, via legal prescriptions and administrative rules, are described. The implications of the interplay between scientific enquiry and research are presented, with legal precedent in the face of potential water shortages, competing uses, sensitivities to comprehensive resource management, considerations of ecological balance and protection of the rights of indigenous people. Many of these findings are transferable to other jurisdictions contemplating the adoption of public trust doctrine principles to their surface and ground waters.

Keywords: Ecology; Legal rights; Resource management; Water

Introduction

Attributed to Roman Emperor Justinian, the public trust doctrine is predicated on the principle that certain resources can be reserved by government for the benefit of the public. When applied to water rights, this doctrine is, by its nature, antithetic to conventional rights conferred upon private parties, akin to private property rights. It imposes limitations on both riparian rights (most prevalent in the eastern states of America) that apply to lands that are contiguous to bodies of water and prior appropriation rights (commonly encountered in the western states of America) that allocate water based on the timing of use.

In the United States, the public trust doctrine had been historically applied to the protection of navigable waters until 1983 when, in the often-cited case of National Audubon Society v. Superior Court, the California Supreme Court ruled that, in connection with the Mono Lake, the state had the affirmative duty to balance conventional rights with ecological values pursuant to the public trust doctrine.

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Opponents of this application to ecological concerns called it the wrong remedy. For example, Walston (1982) argued that although it ‘would provide a basis for protection of important environmental resources … it would jeopardize long standing water rights’. Nevertheless, the concept gradually took root and proponents have even argued in favor of broadening its scope. For instance, Bader (1992) concluded that ‘the public trust doctrine originated out of the desire to protect natural systems so as to ensure their beneficial use by society. Today we must expand the doctrine in a manner that faithfully links environmental protection and resource utilization.’ In the same vein, more recently, Brown (2006) advocated a more aggressive application by expanding ‘the waters that are subject to the public trust doctrine’ and by increasing ‘the doctrine’s reach to include additional purposes and uses within the protection of the doctrine’. At the opposite end, Proctor (2004) bemoaned her finding that ‘the surviving rights that a riparian owner can still exercise in Florida … actually only include those that do not interfere with the state’s use of sovereignty lands, the federal government’s use of the navigational servitude, or the public trust’.

In a revisionist’s view of the actual impact of the Mono Lake decision, Owen (2012) has made the case that ‘the doctrine, though important, has exerted less influence upon California water management than conventional wisdom suggests’, and that ‘achieving the greatest future impact of the public trust doctrine will require more effective integration into the larger system of administrative environmental law’ rather than ‘greater judicial involvement’.

It is relevant to point out that, as Klass & Huang (2009) succinctly advise, ‘at its core, the public trust doctrine remains a state-based doctrine, unique to each state but with lessons transferable to other states’. To achieve this end, it is instructive to share information about the evolving experiences, both judicial and administrative, of the various states.

This paper describes the experience of the State of Hawaii, which, by many accounts, has adopted the most comprehensive application of the public trust doctrine to both surface and ground waters, and the doctrine’s effect on traditional indigenous practices prior to western contact and conventional rights that have evolved since, based on common law. The major decisions that ensued following the application of the doctrine via legal prescriptions and administrative rules, in the presence of the earlier mixture of rights, are described and their implications are discussed in view of water availability and potential water shortages, competing reasonable and beneficial uses, and sensitivity to comprehensive resource management. Many of these findings are transferable to other jurisdictions contemplating the adoption of public trust doctrine principles to their surface and ground waters.

Pre-contact water practices

Prior to western contact through Captain James Cook in 1778, a feudal-like political organization had evolved with a strong religious foundation in the kapu (or taboo) system that regulated the behavior of four population segments: the Chiefs (ali‘i), the priesthood (kahuna), the commoners (maka‘ainana), and kauwa, an outcast class (e.g., Kamakau, 1992). Under this strictly regulated system, an indigenous population, estimated to have reached about half a million people, managed to sustain itself and thrive in the most isolated land-mass location on earth.

The kapu system was abruptly abolished in 1819, just a year before the first Protestant Calvinist missionaries, sent by the American Board of Commissioners for Foreign Missions, arrived from Boston, an event that marked the beginning of a dramatic transition from traditional to modern societal structures, including concepts of private ownership of land and water rights.
The Ahupua`a system

The western concept of privately owned land and water was unknown in old Hawaii. Under the revocable control of a hierarchy of chiefs, reaching all the way up to the King (Mo`i) who was the ultimate trustee, land divisions known as Ahupua`a were regulated by designated supervisors (konohiki), whose responsibilities included the stewardship of the natural resources and the collection of the tribute to the Chiefs from the commoners who worked the land and the sea.

Sustainable practices relating to freshwater (or wai) were of critical importance in the ability of the original inhabitants of the islands to survive and prosper. In their language, the word for ‘wealth’ was simply the reduplication waiwai, whereas the word for ‘law’ incorporated ‘water’ as a constituent of kanawai.

The native population devised an ingenious irrigation system to support the cultivation of taro within the fertile land districts. It consisted of an elaborate system of irrigation ditches (`auwai) that directed stream water to agricultural terraces (lo`i) and back to the stream for subsequent reuse downstream via levees (pani wai) and sluice gates (Dole, 1892; Nakuina, 1893; Kamakau, 1992; Lucas, 1995; Martin et al., 1996). The strict regulation of the distribution of water in terms of allotted amounts of water and irrigation time schedules was controlled by the konohiki who ‘lived in the village and was intimately familiar with its customs, resources, and current physical conditions as well as each individual’s effort and merit. When disputes arose it was the konohiki who was responsible for their resolution’ (Wilcox, 1996). These water-use practices closely resemble those associated with riparian rights to water where occupants of land at the banks of streams and rivers are afforded the reasonable use of water as long as they do not adversely affect other downstream users’ rights to the resource.

Post-contact turmoil

Social and economic upheaval of the old system of land and water commenced with the arrival of Captain Cook in January 1778. Soon, the islands became a stopover and resupply station for fur traders between east and west, and this was followed by the sandalwood trade with China and the development of a major hub of the whaling industry.

The presence of traders and whalers necessitated changes in agriculture and animal husbandry, including the keeping of introduced cattle, in order to replenish the ship-holds of the westerners with supplies to their liking. It was with the direct aid of foreign weapons and strategic advice that King Kamehameha I (‘the Great’), a Chief from the island of Hawaii, finally unified the islands in 1810 under his home island’s name. The arrival of the Calvinist missionaries, beginning in 1820, added another major component to the Hawaiian tapestry.

Kamehameha’s successors adopted western ways and by 1840, under foreign influences, Kamehameha III enacted the Hawaiian Kingdom’s first constitution, completing the transition from a feudal-like to a constitutional monarchy system of governance (Kosaki, 1978; Sai, 2008) that eventually led to the private ownership of land and water rights.

Ownership of land and water

Among the pressures placed on Hawaii’s government from the ever-increasing number of foreigners entering the country was their desire ‘to reside there, to engage in business … to acquire house lots and land, by
lease or otherwise, to build houses on the lot so acquired, and to transfer their property either by sale, lease, will, or inheritance’ (Kuykendall, 1938). The upshot of such foreign advice and guidance was that the same King embarked in 1848 on a land division, known as the *Mahele*, between himself and 245 Chiefs, including *konohiki*. This was a major step that eventually ‘transformed Hawaii’s communal land tenure system to a private property system’ (Liu, 2002). A provision of the new legal system relating to water that has found its way into today’s Section 7–1 of the Hawaii Revised Statutes (HRS) states: ‘The springs of water, running water, and roads shall be free to all, on all lands granted in fee simple; provided that this shall not be applicable to wells and watercourses, which individuals have made for their own use’ (State of Hawaii, 1987).

According to an early interpretation that emerged subsequently, water rights ‘went with the land unless the owner had previously formally relinquished, transferred, divided, or neglected it for a period of over twenty years’ (Nakuina, 1893).

The primary reference to water up to this point was essentially confined to surface water generally flowing in streams. Groundwater that could be reached by the drilling of wells was, as the quote from HRS in the previous section attests, owned by the overlying property owners. In Hawaii, groundwater became a subject of contention after 1879 when the first artesian well was dug into a huge basal freshwater lens on the island of Oahu. Other categories of groundwater include dike-impounded water, perched water confined by impervious soil layers, and water flowing in underground channels. The first two categories were collectively referred to as ‘percolating’ underground water (Takemoto, 1986).

**Plantation economy and water**

Sugar cane was cultivated by the original inhabitants of the islands, but it was in the middle of the 19th century that it became the prime component of Hawaii’s economy, as a result of the contemporary changes in land ownership and water rights, but also because of the appearance of strong markets in the northern US states during the American Civil War when embargos prevented the importation of sugar from southern plantations (Wilcox, 1996).

Sugar cane cultivation demands large expanses of land and great volumes of irrigation water. This combination necessitated the construction of conduits (ditches and tunnels) from surface and underground sources of water to dry lands that were often located significant distances away. The first-documented probable ‘water tunnel or aqueduct constructed in these islands for the purpose of conveying water from a stream for agricultural purposes’ (Williams, 1918) was estimated to have been completed prior to 1849. Over the next few decades, a remarkable network of irrigation ditches criss-crossed all the major islands in support of the cultivation of a very thirsty crop.

In a widely published and circulated article, O’Shaughnessy (1904), a principal hydraulic engineer in Hawaii who subsequently headed the construction of the Hetch Hetchy water system in San Francisco explained that ‘the development of irrigation projects in the Hawaiian islands has been prosecuted with the greatest vigor by private corporations owning sugar estates during the last ten years. No aid for this work has been received from either the local Territorial Government of Hawaii or the National Government at Washington.’ He noted that ‘all the streams on the island of Maui are now tapped by ditches’.

Privately owned sugar and other plantations were granted water development rights resembling the principles of prior appropriation, with provisos relating to previously established traditional and appurtenant water rights. This situation persisted through the overthrow of the Kingdom of Hawaii in 1893 by sugar growers and American businessmen with the support of US marines, the short-lived Republic of
Period of stability

For the greater part of the 20th century, Hawaiian water law was considered settled and firmly established in a unique Hawaiian way, motivating Monahan & Yamauchi (1972) to declare that ‘in general, Hawaiian surface water rights are fairly well defined and offer greater investment security’ than other options. In this environment of relative stability, the courts’ principal role was to settle disputes among private parties. It is notable that the early legal system’s view of water was based on a limited understanding of its physical and ecological attributes. For example, any water that ‘escaped’ to the ocean was often described as being allowed to ‘run to waste’ as opposed to being put to some use (Papacostas, 2001).

Common law water rights

Surface water rights

The evolution of the law regarding surface waters during this period has been widely documented in legal and scholarly publications. The major elements of surface water rights in Hawaii included the following:

Traditional appurtenant rights. These rights, following the Mahele, were attached to the lands that enjoyed the use of water for cultivation or for domestic purposes at that time. The quantity of water so designated was fixed to the amount used at the time when a land grant was awarded by the Land Commission that was appointed in 1845 to settle issues of ownership (Clark, 1986). Through such awards, individual land parcels were converted into fee simple lands. According to Johnson (2009) ‘early cases dealing with the sugar plantations permitted transfers of appurtenant water rights but only after a showing that no harm would be done to other rights holders’.

Riparian rights. Etymologically derived from the Latin word ripa (the bank of a waterway), these rights apply to lands that are adjacent to rivers or streams. In Hawaii, limited riparian rights were fixed by common law in a 1917 Hawaii Supreme Court case (Carter v. Territory of Hawaii) where the concept was applied to surplus freshet (storm) flows only (Hutchins, 1972; Monahan & Yamauchi, 1972; Clark, 1986). Rooted in English common law, riparian rights allow an owner of land adjacent to a body of water to enjoy its use while protecting, by not diminishing, the rights of others similarly situated to do the same. In the USA, this system of water rights is prevalent in the eastern states that have adopted English common law.

Konohiki rights. In a milestone 1930 case (Territory v. Gay), the Hawaii Supreme Court decided that ‘surplus normal flow’ belonged to the owner (or konohiki) of the lands where it originated. Surplus normal flow was defined as the flow remaining after subtracting from the stream’s ‘normal flow’ the flow allotted by traditional appurtenant and prescriptive rights. This decision was affirmed by the US Ninth Circuit Court of Appeals in 1931 (Hutchins, 1972; Clark, 1986). As Monahan & Yamauchi (1972) put it, ‘surplus waters of normal flow [were] entirely owned by the land owner of the unit...
within which they [arose]’ and, consequently, ‘not being appurtenant to any part of his land’, could ‘be conveyed and used elsewhere’.

The Homestead Act provision. In what may at first glance appear to be unrelated to water rights, the US Congress adopted in 1921 the Hawaiian Homes Commission Act (HHCA), the intent of which was to rehabilitate native Hawaiians to land by providing long-term leases to them, having recognized the undesirable consequences of the Mahele in alienating the vast majority of the indigenous people from the privilege of land ownership (Liu, 2002; Sylva, 2007). The HHCA explicitly provided that ‘sufficient water shall be reserved for current and foreseeable domestic, stock water, aquaculture, and irrigation activities on lands leased to native Hawaiians’. This provision was critical ‘because the lands designated for homesteading were second-class, dry and arid lands’ (Liu, 2002).

Groundwater rights

As in most other states, surface and ground water were historically defined as separate entities rather than as two components of a single hydrologic system. Furthermore, in Hawaii, groundwater rights distinguished between artesian waters and other groundwater categories.

Correlative rights. The correlative rights doctrine for groundwater was adopted in Hawaii in 1929 by the City Mill v. Honolulu Sewer and Water Commission case (Hutchins, 1972; Takemoto, 1986; MacDougal, 1988; Callies & Chipchase, 2007). According to Takemoto (1986), ‘for percolating groundwater, the courts developed three alternative doctrines: the English or absolute ownership doctrine (existing in earlier Hawaii law), the American or reasonable use doctrine, and the correlative rights doctrine’. Under the absolute doctrine, the overlying owner has unrestricted use including transporting the water elsewhere, whereas, under the reasonable ownership doctrine, ‘reasonable’ use on overlying lands is unlimited or unrestricted. ‘The correlative rights doctrine adds a further distinction between ‘shortage’ and ‘surplus’ conditions. During surplus conditions, transporters get appropriative [i.e., first come, first served] rights in the surplus amount … During shortages, overlying users are entitled to a proportionate share; transporters get nothing.’

Ground Water Use Act of 1959. Thirty years after the establishment of correlative rights, in the face of potential overdrafts of underground water beyond ‘sustainable levels’ and the occasional detection of contaminants in basal waters, the Hawaii Legislature enacted the Ground Water Use Act of 1959 that established a permit system for all (i.e., proposed and existing) users in critical areas to be designated by the Board of Lands and Natural Resources. Designation would be based on data collection and scientific investigations of the water resource. The first such underground water management area was designated in 1979, 20 years after the law’s enactment (Takemoto, 1986).

Adoption of the public trust and water code

What started as a typical water ownership dispute between two private parties in 1973, the case of McBryde v. Robinson resulted in upending the heretofore established water law in Hawaii in favor of the public trust doctrine. To quote from the case, ‘Thus by the Mahele and subsequent Land Commission Award and issuance of Royal Patent right to water was not intended to be, could not be, and was not transferred to the awardee, and the ownership of water in natural watercourses and rivers remained in
the people of Hawaii for their common good’ (Supreme Court, 2000). This radical departure survived an appeal to the US District Court in Robinson v. Ariyoshi and was reaffirmed in Reppun v. Board of Water Supply, both in 1982 (e.g., MacDougal, 1988).

The Hawaii constitution was correspondingly amended to declare in Article XI, Section 7: ‘The State has an obligation to protect, control and regulate the use of Hawaii’s water resources for the benefit of the people.’ Moreover, ‘the legislature shall provide for a water resources agency which, as provided by law, shall set overall water conservation, quality and use policies; define beneficial and reasonable uses; protect ground and surface water resources, watersheds and natural stream environments; establish criteria for water use priorities while assuring appurtenant rights and existing correlative and riparian uses and establish procedures for regulating all uses of Hawaii’s water resources’ (State of Hawaii, 1987).

To implement the new constitutional provision following a series of contentious debates over a decade, the Hawaii Legislature enacted the state Water Code in 1987 and established the Water Commission within the Department of Land and Natural Resources (DLNR) to administer it.

Having first recognized the need to establish ‘a program of comprehensive resource planning to address the problems of supply and conservation of water’, the legislature declared that ‘the state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest’ (State of Hawaii, 1987).

Table 1 summarizes the principal provisions of the new Water Code.

**Contested Waiahole case**

The new law was put to the test in a milestone case relating to the Waiahole Ditch system on the island of Oahu. According to a subsequent Hawaii Supreme Court opinion, ‘this dispute culminated in a contested case hearing of heretofore unprecedented size, duration, and complexity’ (Supreme Court, 2000; Klass & Huang, 2009). A summary of the major points of the dispute can shed light on some of the issues encountered in the process of converting to the public trust doctrine within the context of a contemporary legal and economic structure and can serve as lessons learned for other jurisdictions.

The irrigation ditch system was constructed between 1913 and 1916 by the Waiahole Water Co., Ltd. According to the project’s inspector engineer, ‘the general plan provided for collecting the water from the many streams and gulches on the windward side of Oahu by means of tunnels through the ridges or spurs, and conveying the water, after collecting, through the mountain in the main tunnel to the leeward side of the island, thence by tunnels, ditches and pipes, to the upper levels of Oahu Sugar Plantation’ (Kluegel, 1916). The Commission on Water Resource Management (1997) discovered that the system was expanded between 1925 and 1935 to capture dike-impounded high-level groundwater, and other improvements continued to be made as recently as 1992.

**Interim flow standard.** In April 1989, lacking the legally required solid scientific basis for establishing in-stream standards in accordance with the provisions of the Water Code, the Commission set the
interim in-stream flow standard (IIFS) for Windward Oahu at the actual flow in each stream on a specified date coinciding with water management area designations. The maintenance of minimum stream flow levels to facilitate in-stream uses, including recreation, fishing and protection of the aquatic environment, is commonly practiced in the USA and internationally (Jowett, 1997; Utton & Utton, 1999). In most cases these requirements have been imposed by regulation, through the exercise of police power, or via acquisition/condemnation rather than by identifying in-stream uses as protected by the public trust doctrine, which is the most controversial approach. Five prior-appropriation western states accomplish these ends via direct appropriation of water, whereas Montana follows a reservation model of excluding further appropriation (Utton & Utton, 1999). In cases where the objective is the protection of the aquatic environment, several methods for determining the appropriate minimum flows in consideration of factors such as food availability, physical habitat requirements, temperature, water quality and biotic interactions have been devised. Among these methods are the historic flow method,

### Table 1. Provisions of the 1987 Water Code.

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<tr>
<td><strong>Administrative Structure</strong></td>
<td>Declares the overarching policy quoted above; designates the Commission on Water Resource Management in the Department of Land and Natural Resources, its composition, duties, procedures, and judicial review; establishes a water resource management fund for monitoring, data collection, research, reporting and dissemination of public information.</td>
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<td><strong>Reports of Water Use</strong></td>
<td>Requires all users of water anywhere within the state to declare their use and attributes, and the issuance of a certificate if the use declared is found to be reasonable and beneficial to be used in resolving existing water rights.</td>
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<tr>
<td><strong>Hawaii Water Plan</strong></td>
<td>Mandates the development of a Hawaii Water Plan consisting of a coordinated water resource protection plan, county water use and development plans, a state water projects plan, and a water quality plan; calls for division of counties into hydrologic units along with current and future water uses, in-stream uses, and sustainable yields.</td>
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<td><strong>Regulation of Water Use</strong></td>
<td>Pronounces procedures for designation, based on scientific investigations and research, of water management areas threatened by existing or proposed withdrawals and diversions of water for the purpose of administrative control; these areas to include existing areas designated via the Ground Water Use Act; establishes ground and surface water criteria for designation, modification or rescinding of designation; requires explicit permitting of all demonstrated ‘reasonable and beneficial’ water uses in designated management areas; provides for declaration of water shortages by the Commission and subsequent permit changes; and declares that appurtenant rights are preserved.</td>
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<tr>
<td><strong>Water Quality</strong></td>
<td>Designates the Department of Health as the subject agency in relation to water quality and the formulation of the Water Quality Plan.</td>
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<td><strong>In-stream Uses of Water</strong></td>
<td>Directs the Commission to establish and administer a statewide in-stream water protection program, including in-stream flow standards or interim in-stream flow standards on a stream-by-stream basis to protect adequately fishery, wildlife, recreational, aesthetic, scenic, or other beneficial in-stream uses.</td>
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<tr>
<td><strong>Wells</strong></td>
<td>Requires registration of all wells and establishes standards and permits for construction and pump installation.</td>
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<tr>
<td><strong>Stream Diversion Works</strong></td>
<td>Requires registration of such within and without management areas, and permits for construction or alteration.</td>
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<tr>
<td><strong>Native Hawaiian Rights</strong></td>
<td>Preserves certain provisions (such as those of the Hawaii Homes Commission Act of 1920) and the traditional and customary rights of <em>ahuupua‘a</em> tenants who are descendants of pre-western contact inhabitants; and preserves the appurtenant rights of <em>kuleana</em> and <em>kalo</em> lands.</td>
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hydraulic methods measuring discharge as a fraction of hydraulic geometry, and habitat methods that are
based on hydraulic conditions that meet specific biological requirements’ (Jowett, 1997). In any case,
the recognition that natural stream flows should be allowed to persist represents a clear departure from
the earlier exploitative philosophy of considering any unused water as wasteful. In the words of the
Hawaii Supreme Court, ‘We thus hold that the maintenance of waters in their natural state constitutes
a distinct ‘use’ under the water resources trust. This disposes of any portrayal of retention of waters in
their natural state as ‘waste’’ (Supreme Court, 2000). The major in-stream purpose that emerged in the
Waiahole contested case was the protection and propagation of native species in the freshwater streams
and the estuary at the stream–ocean interface.

The Windward Oahu area was so designated in July 1992. Pursuant to the provisions of the Water
Code, the Waiahole Irrigation Co. applied for a combined-use permit to preserve all of its existing allo-
cations. In June of the same year, the sugar company had announced plans to cease its operations by
1995. In response, the State Department of Agriculture petitioned to reserve the plantation’s water
for future agricultural use. Petitions to reserve were also filed by six other groups, including three com-

munity groups and the Department of Hawaiian Home Lands. The three community groups filed
petitions to amend the interim in-stream flow standard, and so did the state’s Office of Hawaiian Affairs
(OHA) in 1995.

Following visits to investigate allegations of water waste and an agreement by 17 parties to mediate
the IIFS issue, ‘the commission on January 25, 1995 ordered that a combined contested hearing be held
on the [pending] petitions’ and other matters. A total of 25 parties became part of the combined hearing.
Prior to the closing arguments in September 1996, 161 written testimonies were introduced along with

Commission’s decision. Relying on 1109 enumerated findings of fact and an explanation of the legal
grounds it considered, the Commission issued its 250-page decision in December 1997, which apportioned
the available water among in-stream uses, various agricultural uses, and non-permitted buffer amounts of
groundwater. Several requests for water-use permits were denied, among them a request for golf-course use
and landscape uses related to a proposed residential housing development. Interestingly, among the con-
clusions was the fact that there was not sufficient scientific evidence to establish in-stream flow standards balancing the multiple competing uses, but the Commission decided to err on the side of caution
by increasing the IIFS with supplemental ‘non-permitted’ flows for which no permit had been issued, and
permitted, but unused, agricultural water. It considered the increased flows as the basis for long-term studies
to enhance knowledge of these matters. Difficult as the decisions were, the Commission determined that the
permitted uses would not effectuate a condition of shortage that would have a multiplicative effect on the
balancing of reasonable and beneficial uses. Nevertheless, ‘aggrieved parties, representing both applicants
for water use on the Leeward side and applicants seeking to release water into windward streams, appealed
to the Hawaii Supreme Court’ (Callies & Chipchase, 2007).

Affirmation of the doctrine

Having traced the modern expression of the public trust doctrine in the USA to an 1892 US Supreme
Court decision relating to the protection of the navigable waters of Lake Michigan for the people of the
state (in Illinois Central Railroad Co. v. Illinois), the Hawaii Supreme Court cited precedents establishing
the concept to navigable waters ‘in and around the territory of the Hawaiian Government’ and later
decisions that ‘confirmed our embrace of the public trust doctrine’ to other resources, for example, the lands under the shoreline high-water mark.

As to the application of the doctrine to freshwater resources, the court quoted an earlier decision that ‘The right to water is one of the most important usufruct of lands, and it appears clear to us … the right to water was specifically and definitely reserved for the people of Hawaii for their common good in all of the land grants.’ That decision recognized that in relation to freshwater ‘the extent of the state’s trust obligation of course would not be identical to that which applies to navigable waterways’ (Supreme Court, 2000).

The court then proceeded to outline the relationship of the public trust doctrine to the state Water Code and to enunciate the fundamental principles of the doctrine as applied to Hawaii’s water resources in terms of its scope and substance. In establishing these principles, the court asserted that ‘the public trust, by its very nature, does not remain fixed for all time, but must conform to changing needs and circumstances’.

**Relationship to the Water Code**

Rejecting arguments by certain parties in the contested case that the passage of the Water Code and its various provisions relating to permitted uses of water extinguished the public trust doctrine, the court maintained that the doctrine was rooted in common law and was clearly and unambiguously enunciated by a valid constitutional mandate in accordance with its framers’ intent. Concluding, the court asserted that ‘the Code and its implementing agency, the Commission, do not override the public trust doctrine or render it superfluous. Even with the enactment and any future development of the Code, the doctrine continues to inform the Code’s interpretation, define its permissible ‘outer limits,’ and justify its existence. To this end, although we regard the public trust and the Code as sharing similar core principles, we hold that the Code does not supplant the protections of the public trust doctrine.’

**Scope and substance**

In a well-reasoned conclusion, the court declared that the scope of the public trust doctrine applied to all water resources of the state ‘unlimited by any surface-ground distinction’ because ‘both categories represent no more than a single integrated source of water with each element dependent upon the other for its existence’. It thus recognized the scientific fact of the existence of an integrated water resource system rather than a dichotomy between the hydrologically connected surface and ground water. With reference to the specific Waiahole Ditch system, the connection between dike-impounded groundwater and stream flow had been established by scientific and engineering studies that had shown that water diversions of groundwater had reduced the natural flows in several streams, even though consensus regarding the exact relationship between the two is still unresolved. This relationship was poorly understood previously when common law precedent established the legal framework of regulating the two components independently of each other, a situation that remains true in the vast majority of American states (whether governed by riparian or prior-appropriation water-right regimes), despite increasing attempts to bring groundwater within the reach of the public trust doctrine (Browning, 2011). Typical objections to the expansion of the doctrine to groundwater involve arguments relating to the taking of property rights and economic dislocations of long-standing business practices and conditions.

The substance of the public trust doctrine as applied in Hawaii was defined in terms of the protected purposes or uses of the water resources on the one hand and the concomitant duties and responsibilities of the state with regard to it on the other.
Protected trust purposes. The court enumerated various protected uses as falling under the protection of the doctrine, beginning with the original provision of the Illinois Central decision of protecting the public rights to navigation, commerce and fishing. To these were later added ‘a wide range of recreational uses, including bathing, swimming, boating, and scenic viewing’ (Supreme Court, 2000) and domestic uses, particularly for drinking, as well as resource and ecological protection (including the protection of birds and marine life), and the preservation of scenic beauty. Consistently, with state law and precedent, it affirmed appurtenant rights (as defined earlier) and ‘Native Hawaiian and customary rights’ as constituting public trust purposes. Finally, although private uses for economic development could be permitted in balancing the benefits to be derived from the use of water, the court stopped short of declaring them as protected uses under the trust doctrine, reasoning that ‘if the public trust is to retain any meaning and effect, it must recognize enduring public rights in trust resources separate from, and superior to the prevailing private interests in the resources at any given time’ (Supreme Court, 2000).

Duties and responsibilities. Interpreting Hawaii legal precedent and the state constitution identified a dual mandate to the state’s responsibility flowing from the doctrine, specifically to protect the resources for the benefit of present and future generations and to develop the state’s water resources to the maximum reasonable and beneficial use. The two objectives are by their nature inconsistent, one emphasizing the conservation of resources, the other pursuing their utilization. Refusing to establish absolute priorities among broad categories of uses (whether protected or otherwise), the court charged the Water Commission, which it characterized as the guardian of public rights under the trust, with the responsibility to ‘weigh competing public and private water uses on a case-by-case basis, according to any appropriate standards provided by law’, nevertheless reserving to itself the ultimate authority to interpret the trust’s scope and extent. As one commentator observed, ‘The most expansive judicial interpretation of the public trust doctrine has occurred in Hawaii. Hawaii applies the public trust doctrine not only to traditional public water rights, like navigation, commerce, and fishing, but also to recreational uses, such as bathing, swimming, and boating … Hawaii held that the public trust doctrine applies to all water resources within the boundaries of the state without qualification; it is not limited to navigable waters or tributaries affecting navigable waters’ (Browning, 2011).

To emphasize that the balancing of beneficial uses does not in effect eviscerate the doctrine, the Hawaii Supreme Court admonished the Commission that ‘any balancing between public and private purposes begin with a presumption in favor of public use, access, and enjoyment’ (Supreme Court, 2000). Moreover, the Commission was empowered to revisit prior allocations of water to the various uses in response to changing conditions (such as water shortages) or scientific knowledge of the system’s dynamic behavior.

Continuing debate

In a seminal article that followed the passage of the Water Code, MacDougal (1988) anticipated ‘contradictions and ambiguities which, for the most part, remain to be sorted out’. As the implementation of the public trust doctrine continues to evolve via administrative rule-making and case law, the debate continues to flare up in research publications and position papers offered by the proponents of often diametrically opposed precepts. Examples of these include the argument that beneficial uses and local land-use plans should be given priority over ‘contrived preservationalism’ and that depriving owners of rights they enjoyed earlier constitutes an illegal taking that merits just compensation (Callies &
Chipchase, 2007), and calls for the primacy of customary and traditional rights of the indigenous population (Liu, 2002; Sylva, 2007). An environmental group has even called for the outright abolition of the Water Commission, claiming that its only purpose appears to have degenerated into giving '[stream] diverters years, even decades of water as the [stream restoration] challenges to their use drag through the commission’s unwieldy process’ (Anonymous, 2010). Between the extremes are specific entities that wish to preserve their use of water as they have become accustomed.

Conclusion

In terms of its availability and quality, water is becoming a critical resource on a global scale, partly because of population growth and partly because of increased demands to support the rising expectations of the population for ever-improving quality of life.

Through a constitutional amendment and subsequent state Supreme Court affirmation, the State of Hawaii has adopted the most comprehensive interpretation of the public trust doctrine in the United States as applied to the balancing of the dual objectives of preserving its water resources (both surface and subsurface) for the benefit of the present and future generations while maximizing the development of reasonable public and private beneficial uses.

Hawaii represents a geographically isolated region, a microcosm that can accentuate the issues associated with anticipating the possibility of water shortages and attempting to develop a working framework based on the public trust doctrine in the face of established and competing practices and uses. Moreover, decisions concerning reasonable and beneficial water uses are expected to be based on scientific investigations that address physical, social, economic and environmental considerations. This is a tall order for physical and social researchers and scientists, and for water resource engineers, particularly in their attempts to quantify the minimum flows (in the case of streams) and maximum sustainable yields (in the case of groundwater resources) that optimize the dual responsibilities of preservation and resource development.

In its basic principle, the public trust framework being attempted in Hawaii is reminiscent of the konohiki practices of the ancient Hawaiians. Just like the konohiki, land division agents appointed by the Chiefs and given strict authority to regulate the use of irrigation water, the Commission on Water Resource Management in Hawaii is charged with the responsibility of attempting to strike a balance on a grander statewide scale and across a multiplicity of social, economic and environmental considerations.

Developing this parallel further, the ancient system operated under the strict but universally accepted authority of the konohiki who were required to possess technical water management skills but also leadership skills commanding the respect of the community to maintain social harmony. Whether the permit-based bureaucratic (administrative) framework evolving in Hawaii will prove to be as practicable and long-lasting as the ancient konohiki system remains to be seen!

References


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