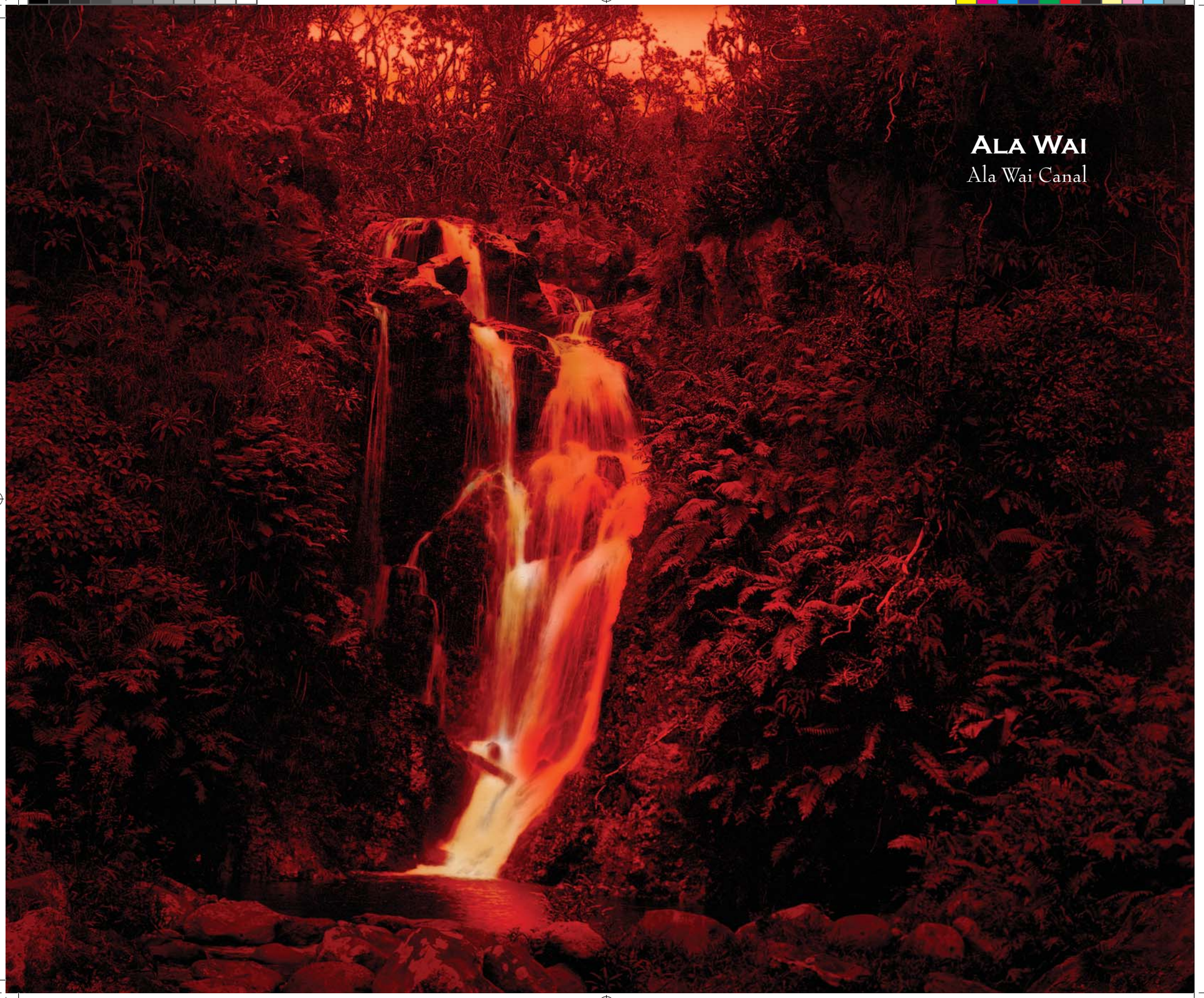


Inā e lepo ke kumu wai, e hō'ea ana ka lepo i kai.

If the source of the water is dirty, the muddy water will travel on.

Where there is evil at the source, the evil travels on.

—Mary Kawena Pukui, *Ōlelo No'eau*

In this chapter, we review the history of the Ala Wai, which was created by Walter F. Dillingham's Hawaiian Dredging Company in 1921–1928 and was aptly first known as the Waikīkī Drainage Canal.[1] Whereas Lē'ahi is the most recognized landmark associated with Waikīkī, the Ala Wai is the mark on the land—indeed the scar on the *'āina*—responsible for creating the Waikīkī we know today. The canal ostensibly was created to clean up Waikīkī's so-called swamps, which harbored mosquitoes feared as carriers of disease. However, the engineering project was really undertaken as a reclamation endeavor, to create land suitable for development into commercial and residential real estate. Although the enterprise was a gigantic business deal orchestrated largely by two men, Dillingham and Lucius E. Pinkham, the groundwork for reclamation was laid by Sanford B. Dole's republic, which stole Hawai'i's government from the Hawaiian monarchy in 1893.

In what follows, we examine how a group of prominent *haole* men drained much of Waikīkī's living waters, producing in the process a filthy canal that is a grievous health hazard. Indeed, these men cleaned up nothing by ruining Waikīkī's wetlands; instead, they produced a landfill that harbors one of Hawai'i's most polluted areas. Ravaging Waikīkī's wetlands not only decimated the region's environment, but also destroyed farmers' hard-won livelihoods and residents' beloved homes. Before the Ala Wai Canal, Waikīkī was a thriving site of agriculture and aquaculture, carefully tended by Native Hawaiians and by Asian immigrants who often first worked in Hawai'i as contract labor. Although powerful *haole* officials and businessmen ultimately displaced these individuals, their cultivation efforts, like Waikīkī's apparently stilled waters, continue to leave an imprint on the region. Scholars and activists have educated Hawai'i's residents and visitors alike about farmers' stewardship of Waikīkī; those who experienced Waikīkī as a food-producing area have imparted their knowledge in oral histories. Furthermore, critics of the canal's historical and current effects have publicized their complaints and fought to clean up the Ala Wai. All of this work, which bubbles up alongside the flashy, hyped narratives that sell Waikīkī as a tourist destination, parallels the running waters that escape the containing power of the Ala Wai Canal. Thus, the waters of Waikīkī are not completely buried under fabricated land, a concrete jungle, and the false advertising that represents today's Waikīkī as a "natural" paradise. They live on.

In the early morning and evening, people often use the Ala Wai area for recreation: golfers swing clubs at the nearby golf course, outrigger canoe paddlers navigate the canal's murky water, and individuals walk or run along the pavement lining the waterway. High-rise condominiums dominate both sides of the canal: the area is sometimes called the Gold Coast, a moniker that reflects the value of the region's high-priced real estate and proximity to the ocean. Despite the waves that lap the shore several blocks away, the commanding view of the Ko'olau Mountains from the canal's sidewalks, and the outdoor leisure people pursue there during daylight hours, the Ala Wai is a resolutely urban place. Concrete is everywhere, as are the sounds and smells of rushing cars, trucks, and

buses. Signs posted near the canal inform those who pause to read them that fish and shellfish living in the waterway are contaminated. This information comes as no surprise—if you stand next to the Ala Wai to look closely and breathe deeply, your eyes and nose are assaulted by the trash and poisons in the water. Styrofoam cups, cigarette butts, pesticides, and auto emissions swirl about in the canal, producing a hideously toxic concoction.

By contrast, if you sit at the bench near Wai Nani Way along the Ala Wai Canal and turn your gaze upward, you can observe the mountain watershed that once fed Waikīkī's flourishing wetlands.[2] Three main valleys from your left to right—Makiki, Mānoa, and Pālolo—serve as channels for rainwater that runs off the Ko'olau Mountains. Three streams—Pi'inaio, 'Āpuakēhau, and Ku'ekaunahi—once washed this freshwater through wetlands and ponds out to sea. However, their courses have been altered radically and diminished by the Ala Wai, into which they now largely drain. The streams have not disappeared fully, as the water that empties into the canal directly across from your bench may well be a remnant of the Ku'ekaunahi, which flowed down from Pālolo Valley.[3] Furthermore, a small portion of 'Āpuakēhau Stream likely trickles alongside the canal about three streets over to your left, and much farther down in that direction, a possible remnant of the Pi'inaio runs beneath a large condominium across from Kuamo'o Street.[4] Evidence of the streams' continued existence despite the Ala Wai Canal is scattered throughout Waikīkī, and this evidence serves as a kind of testimony to the resistance that accompanied Dillingham and Pinkham's dredging project and that feeds work to restore Waikīkī's watershed today.

In 1924, midway through the construction of the Ala Wai, the Paia family refused to clear off their home site until Dillingham's dredge was literally at their door.[5] Like many

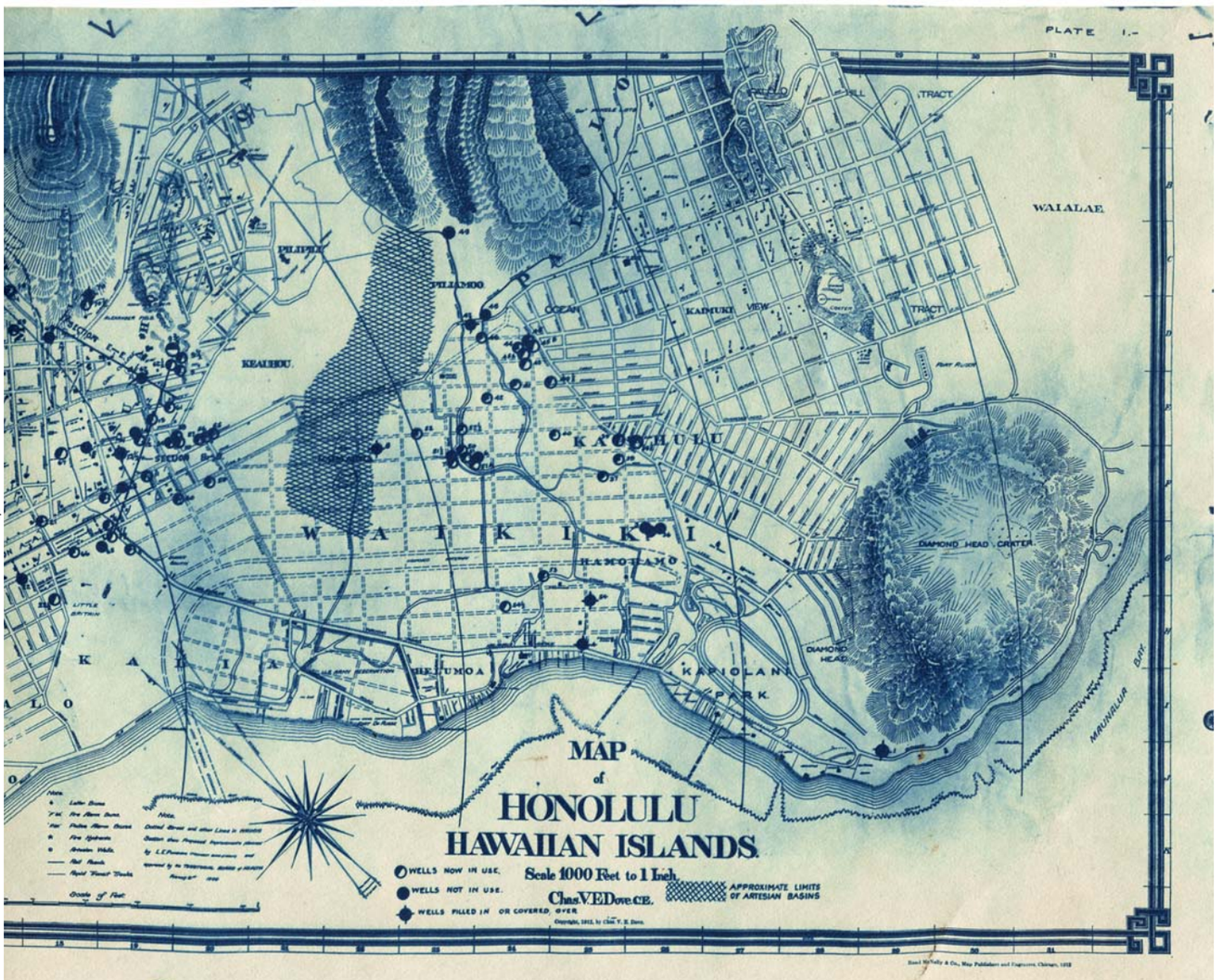
Waikīkī residents, they had been forced to sell their tract to the Territory of Hawai'i, and they were deeply upset about losing most everything that was special to them: their land, house, community, and even some of their ancestors—chiefs buried on the property.[6] The Paias' great losses were supposedly the price of progress; territory leaders in government, industry, and the press argued that reclaiming land in Waikīkī would sanitize, beautify, and increase the value of the area. In 1923, F. W. Thrum, the engineer in charge of dredging the canal, used the widely read *Hawaiian Annual* to sing the praises of the engineering work underway and ahead.

> The area to be drained and filled comprises 1,400 acres and will, when completed, not only add greatly to the health of this section of Honolulu but will make available a new tract for residential purposes. . . .
>
> The picturesque as well as odoriferous duck ponds are fast becoming but a memory. The tourists who saw only the artistic side of the duck ponds will be equally satisfied with the beauty of the canal, boulevards and park strip that is fast taking the place of the too-long neglected menace that the duck ponds were to the health of Honolulu.[7]

In his report, Thrum notes that Waikīkī is already a tourist destination and proclaims that after the canal is built, the region will make way for residents (he says nothing of those residents displaced by the dredging). He mentions—with dripping irony—that some visitors to Waikīkī find the duck ponds of area farms attractive, but he implies that these tourists do not recognize that the ponds are not only foul smelling, but also health hazards. For Thrum, the dredging will eradicate dangerous, offensive wetlands and provide visitors with a healthful and beautiful canal to enjoy.

This vision of reclamation as a campaign to clean up and improve Honolulu and its environs was first promulgated under the Republic of Hawai'i in 1896. That year, the legislature passed Act 61, which granted the Board of Health the power to deem land unsanitary and authorize its improvement by the owner or by the government (at the owner's expense) if the owner could not do so.[8] Act 61's long name precisely describes how those of few means would lose their property under the legislation: "An Act to Provide for the Improvement of Land in the District of Honolulu Deleterious to Public Health and for the Creation and Foreclosure of Liens to Secure the Payment of the Expense so Incurred."[9] Act 61 lived on in the Territory of Hawai'i as sections 1025 to 1034 of Chapter 8 in the 1905 *Revised Laws of Hawai'i,* and in this incarnation supported the building of the Ala Wai Canal.[10]

Just what was it, however, that led F. W. Thrum and others before him to argue that Waikīkī's duck ponds were unsanitary? How unsanitary were they? Were health issues really at the heart of reclamation? Prior to urban "improvement" projects, Waikīkī's wetlands were by no means delete-



rious. The Piʻinaio, ʻĀpuakēhau, and Kuʻekaunahi streams, fed by the Koʻolau watershed, drained into the ocean at beach sites in Kālia, Uluniu, and Hamohamo, respectively. From the sixteenth through the nineteenth century, Native Hawaiians tended taro fields and fishponds in the wetlands these streams nurtured. From the mid-nineteenth century to the early twentieth century, as foreign disease felled thousands of *kānaka maoli,* Asian settlers cultivated rice, lotus root, and ducks in the watery expanses formerly devoted to Native Hawaiian staples. All the laborers who farmed in Waikīkī created effective drainage and pond maintenance systems to secure the health of their crops and stock. Their work was at times compromised through no fault of their own. Drainage problems developed in Waikīkī from the late nineteenth century because of urbanization, when roads were built and expanded in the area (thereby blocking runoff) and when a drainage system for land from Punchbowl to Makiki diverted surface water to Waikīkī.[11]

The first official report to maintain that Waikīkī was unsanitary—the document that paved the way for the Ala Wai—provided no specific information about drainage and standing water to back up its author's claim that the region's wetlands were hazardous. Hawaiʻi Board of Health President Lucius E. Pinkham authored the

report in 1906, amended it in 1907, and titled his work "Reclamation of the Waikīkī District: For the Making of Honolulu as Beautiful and Unique in Character, as Nature Has Endowed it in Scenery, Climate and Location." In his text, Pinkham repeatedly asserted, with no supporting statistics or case studies, that a large section of Waikīkī contained "687 acres of land, all lying below a five-foot grade above sea-level, and utterly incapable of surface or sewer drainage and threatening present and future public health."[12] The names of landowners in the area in question and the assessed tax value of their properties immediately followed this assertion.[13] This seemingly secondary information actually goes to what became the real thrust of Pinkham's argument: in his report, he was less concerned with health issues than with turning Waikīkī into a real estate mecca. Pinkham asserted that Waikīkī reclamation would attract wealthy settlers and visitors to Honolulu by providing them with beachfront quarters; a canal as lovely as those in Venice, in which boats could be raced; and roadways for speedy land travel. Pinkham declared, "man is becoming discontented with short distances and tame sport. He desires ocean racing and thirty-one seconds per mile automobiling. What may happen if Honolulu can furnish the most attractive means of satisfying these longings in our incomparable climate may be imagined."[14]

More health-specific arguments related to Waikīkī's wetlands were presented in two other reports that followed Pinkham's. In 1909, W. C. Hodby, the chief quarantine officer for the U.S. Public Health and Marine-Hospital Service authored "The Outlook for Quarantinable Diseases in the Territory of Hawai'i." In 1912, the *Report of the Sanitary Commission (Created Under Act of the Legislature of 1911) to his Excellency the Honorable W.F. Frear, Governor of Hawai'i* was produced at the behest of the territory. Hodby's document vigorously advocated exterminating mosquitoes, which carried diseases such as malaria and yellow fever that Hodby feared could spread to epidemic proportions.[15] The Sanitary Commission extended Hodby's alarm about mosquitoes to concern about wetland agriculture in Waikīkī. The commission report argued that "the immense loss due to mosquitoes" outweighed the value of crops that would be lost by filling wetlands and claimed that such reclamation would provide an important asset: new housing tracts.[16] After a single case of yellow fever surfaced in Honolulu in 1911—a quarantine officer contracted the disease from a traveler from Mexico—Walter F. Dillingham and a group of other promi-

nent businessmen issued a resolution against the offending insects. Honolulu's leaders of industry declared that in order to protect their business interests against disease, they would cooperate with the authorities to exterminate mosquitoes.[17]

This proposed cooperation belies the self-serving bonds that linked Dillingham, Pinkham, and Governor Frear. As Barry S. Nakamura has demonstrated, Dillingham and his helpmates were less concerned with mosquitoes and sanitation than with creating valuable real estate by dredging Waikīkī's wetlands. Nakamura's 1979 history of Waikīkī reclamation exposes Dillingham's collusion with key power brokers, including Pinkham, Frear, and William Owen Smith. Pinkham, originally brought to Honolulu as an employee of Dillingham's father,[18] was governor of Hawai'i when three laws to facilitate reclamation were passed.[19] Frear, Dillingham's brother-in-law, was governor of the territory when the 1911 report recommending the draining of Waikīkī was issued. Smith and Dillingham's father were part of the oligarchy that overthrew the Hawaiian government, and as president of the Bishop Estate, Smith sold estate property near the proposed canal to the younger Dillingham for a cheap price.[20] Nakamura not only uncovers this inglorious birth of the Ala Wai Canal, but also shows that Waikīkī's supposedly mosquito-infested swamps and "odiferous duck ponds" were really productive farming ventures.

Nakamura's investigative scholarship provides the most in-depth examination of pre–Ala Wai Canal aquaculture and agriculture in Waikīkī. It also represents the core of a body of research that documents how farmers' livelihoods were displaced or destroyed by dredging. This research shows not only that Waikīkī's wetlands fed, rather than harmed, a community, but also that Waikīkī farmers and residents resisted the reclamation that paved the way for turning Waikīkī into a prime tourist destination.

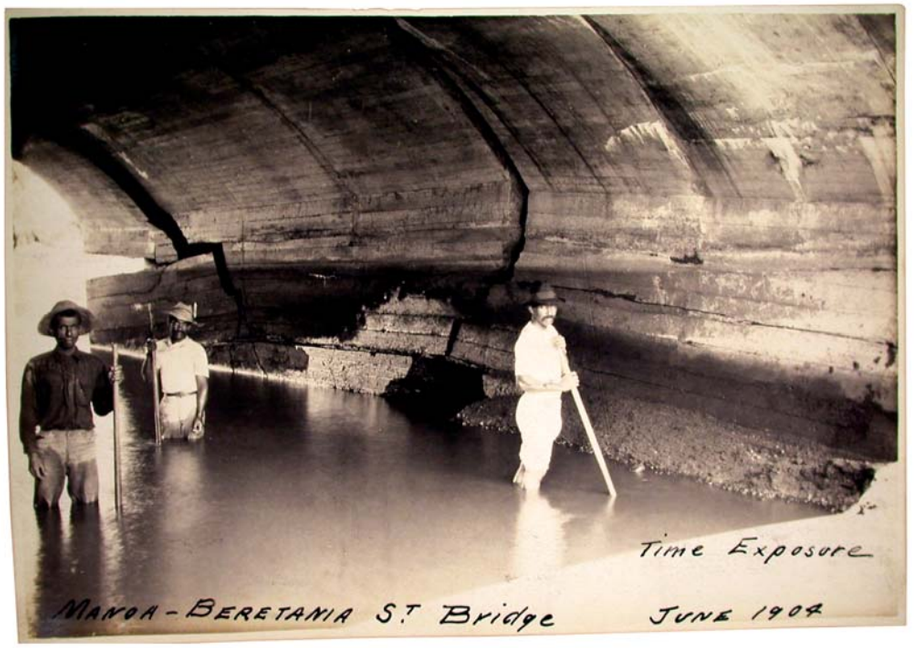
A 1901 article in *Paradise of the Pacific,* while by no means a wholly flattering account of duck farming, nevertheless demonstrates the efficiency, cleanliness, and productivity of the business. The author describes the workings of what he calls a "Chinese duck ranch" and maintains that it is typical of countless such enterprises across O'ahu. Although he bemoans duck farms' appearance, describing them as "painful eyesores," he admires the farms' workings.[21] He notes that the duck rancher carefully monitors every stage of his birds' growth and guards his flock from predators such as mongoose. He also states that the rancher gets two uses from his irrigation ditches, which he freshens regularly: he employs them not only for ponds, but also for growing bananas.[22] Although this account deems O'ahu duck farms unsightly, it reveals that farm operations were well organized, economical, and sanitary.

One of the earliest endeavors to document duck farming and other agricultural ventures thriving in the areas that Dillingham drained is a history paper written in 1975 by University of Hawai'i undergraduate Harlan Lee. Lee's paper outlines the history of Waikīkī reclamation and focuses on how this engineering project displaced hundreds of Native Hawaiian, Chinese, and Japanese families who tended taro, rice, and ducks. Indeed, he discusses how his father's family had to give up their farm in Waikīkī once area real estate appreciated after dredging: the Lees could no longer afford to rent the land they cultivated.[23] In his introduction, Lee reproduces a carefully labeled map of his grandfather Y. K. Lee's farm with surrounding landmarks and households. The map, which provides little-known information about the appearance and function of the Waikīkī agricultural community, shows where ducks, chickens, and pigs were raised, the fishpond on the Lee property, and the tracts owned by neighboring Native Hawaiian and Japanese families.[24] In addition to this visual information, Lee's text uses biting humor to give expression to the anger and resentment of those dislodged from their homes and businesses. He concludes, ". . . for the many displaced former residents of the area, who were moved out in the name of progress and sanitation, the memories of Waikīkī are

revived from time to time whenever construction crews for a new condominium dig below the surface and release a pocket of that odoriferous duck pond stench—the real foundation of today's Waikīkī."[25]

Lee hoped his study would contribute "toward a fuller sociological study" of the effects of urbanization on farming, and indeed it did.[26] The same year that Lee wrote his paper, Tin-Yuke Char compiled and edited a book on the history of the Chinese in Hawai'i. In this book, Char examines the rice industry in Hawai'i, a business begun to make use of the countless taro fields that fell into disuse as the *kānaka maoli* who had cared for them perished from foreign disease.[27] Most of those who undertook this venture were Chinese, and for a time, rice farming flourished in Waikīkī. In 1892, two years after the zenith of rice production in Hawai'i (as much as 10,579,000 pounds left island shores in 1890[28]), Waikīkī was the third largest rice-producing region in Hawai'i.[29] American and Chinese concerns (notably Chulan and Company,[30] Chin Wo Company, and Lung Doo Wai Company[31]) oversaw production in Waikīkī, although Chinese laborers did the actual farming. Many of these workers were *wah kiu* (Chinese sojourners) who came to the Hawaiian Islands "to make money and then to return to their homelands with higher social and economic status."[32] However, those who married and had families in Hawai'i had an impetus to stay, and some of these farmers' descendants cultivated rice in Waikīkī up until the dredging for the Ala Wai.

When work on the canal began in 1921, rice was no longer a key crop in Hawai'i, in part because of a decline in Chinese labor. Once Hawai'i became a U.S. territory, America's Chinese Exclusion Act (passed in 1882) extended to Hawai'i, virtually halting Chinese immigration there.[33] America's and Hawai'i's white residents feared the large influx of Chinese labor brought to the country's shores for cheap



labor in developing industries and felt particularly threatened when Chinese workers began their own businesses in their new homelands.[34] Although rice was not big business in Waikīkī by 1920, for Dillingham and his supporters, rice farmers—as with duck farmers—stood in the way of turning a profit in Waikīkī. These farmers made good use of the region's wetlands, which Dillingham was determined to fill for real estate.

Like Lee and Char's research, Nakamura's work also documents successful duck and rice farming in Waikīkī. In addition, Nakamura highlights commercial aquaculture ventures in the region. He details the findings of U.S. Commission of Fish and Fisheries worker John N. Cobb's 1901 survey, "Commercial Fisheries of the Hawaiian Islands," which noted that fifteen fishponds comprising 51.16 acres in Waikīkī supported healthy businesses largely run by Chinese.[35] One pond was devoted to rice, and the remaining fourteen were devoted to *'ama'ama* (mullet) and *awa* (milkfish), which were sold to two Chinese firms that controlled the market for these fish.[36] Cobb was very impressed with the bounty these fishpond operations produced and advocated their maintenance.[37] Unlike other *haole* investigating Waikīkī's wetlands, when Cobb examined the area's watery expanses, he saw healthy, vigorous aquaculture.

In addition to proving that Pinkham and others were wrong when they characterized Waikīkī as dirty swampland, Nakamura's research demonstrates that agricultural workers threatened by Dillingham's dredge did not merely roll over when faced with the combined forces of politicians and businessmen bent on the reclamation of Waikīkī. Nakamura unearthed farmer complaints issued against Dillingham's Hawaiian Dredging Company and showed that a number of these Waikīkī tenants and workers filed suit against the company. The scholar quotes a powerful indictment from a farmer

named Chang Fow, who demonstrates how the dredging destroyed productive cultivation.

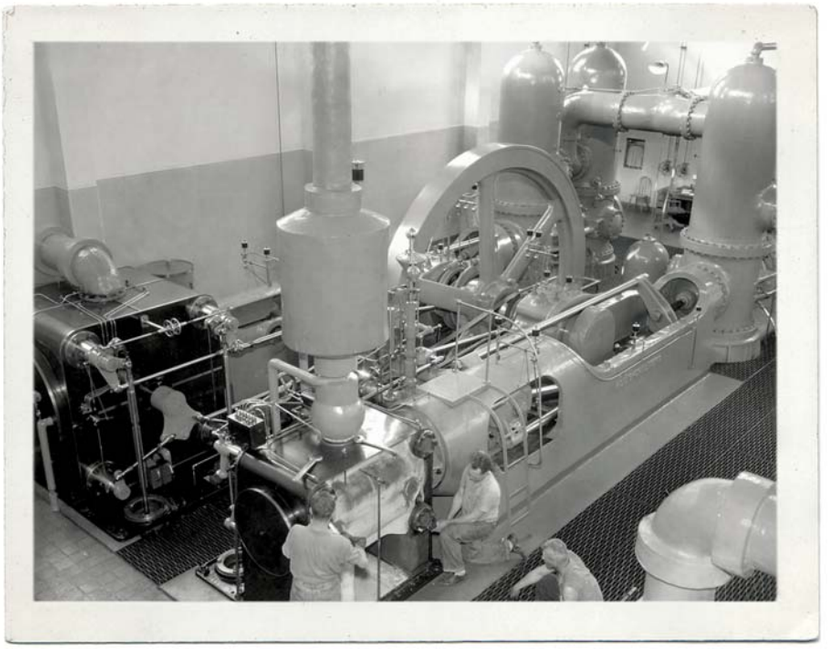
> Salt water escaped into my fishponds and killed all of the fishes in them. Then when my flock of five hundred ducks swam about the ponds and ate the dead fishes floating in them, they got ill and died at the rate of about twenty to thirty every day until now I have only about a hundred of them left. The ducks died in such number each day that I have not had time to bury them fast enough and in the course of a day or two worms begin to creep out of these carcasses and when my chicken *{sic},* numbering over a hundred, ate these worms, most of them got sick and perished. It cost me about $2.25 to raise a duck from a duckling up to the time she begins to lay and

multiplying 400 ducks by $2.25, I have calculated my loss in ducks alone to be $900.[38]

Fow received merely $250 from the Hawaiian Dredging Company; the highest single amount awarded by a court of law to the tenant farmers Nakamura studied was $449.25.[39] Waikīkī agricultural workers fought hard to safeguard their businesses: they thoroughly documented the devastating damages they incurred and directly confronted the Hawaiian Dredging Company in writing and in the courts. However, they were by no stretch of the imagination compensated for their losses.

Nakamura's research, which echoes many of the oral histories of Waikīkī recorded in 1985–1986 by the University of Hawai'i's Center for Oral History, provided the foundation for Carol Bain and Ed Coll's 1994 documentary *Taking Waikīkī: From Self-sufficiency to Dependency. Taking Waikīkī* puts images to the history Nakamura mined and, by quoting sentiments expressed by those who promoted and those who decried the canal, makes the story of the Ala Wai and resistance to it come alive. Shown across Hawai'i in classrooms and rented on videotape by those intrigued by Waikīkī's development, *Taking Waikīkī* makes Nakamura's discoveries available to those who have not read his important thesis. The four-volume published transcripts of Waikīkī oral histories, placed in libraries across Hawai'i, also provide those who live in and visit Hawai'i with a living history of Waikīkī's wetlands and their destruction by the Ala Wai Canal. The twenty-nine histories, most of which recount the productivity of Waikīkī before the Ala Wai, include stories of children gathering *pūpū* (shells) for duck feed,[40] Japanese immigrants harvesting rice,[41] and residents collecting fish washed from neighboring ponds by flood rains.[42]

Furthermore, a 1985 oral history interview with Earle "Liko" Vida, who operated the dredge that dug the Ala Wai, demonstrates that the living waters of Waikīkī—like farmers who resisted the destruction of their livelihood—resist constriction by the canal. In the interview, Vida recounts flood-



ing problems in Waikīkī, noting one area in particular that is especially subject to overflow.

> The lowest part of the canal between McCully and Kapahulu is at Paoakalani, right in Waikīkī. If you notice when we have a heavy, heavy rain, all the water settles right there. . . . [It is too shallow.] The pond that was there before needed more fill. It's just like resettling. . . . You get your finger corals and stuff like that. They get 'em underneath like that, and then *bumbai* [later], they'll rot, you see. And then, you got space in there. So it's got to be filled somewhere. So, you get your turbulence every once in a while and it settles.[43]

Thus, Dillingham's dredge and fill operation was not completely successful in plugging up Waikīkī's wetlands. At times, the region's waters flow and pool, just as the history of Waikīkī aquaculture and agriculture rises up in the records left by protesting farmers, reminiscences of residents, and research of scholars.

The fight against the Ala Wai Canal continues in the work of citizens concerned about the waterway's toxicity. Ironically, the men who decried the unsanitary conditions of Waikīkī's wetlands ended up creating a manmade body of water that is—in words Pinkham might have used—extremely deleterious to public health. A 1995 study published by the Mamala Bay Study Commission noted that during one storm in January of that year, the Ala Wai Canal dumped as many *enterococci* bacteria (which can contribute to severe gastrointestinal disease) into the bay as the Honolulu and Sand Island wastewater treatment plants combined.[44] The following year, citizens appalled by such invisible hazards (which include dangerous levels of metals and pesticides), as well as by the visible garbage and stench of the canal, formed the Ala Wai Canal Watershed Water Improvement Project, coordinated by Eugene P. Dashiell. The project brought together almost 275 people on its Steering Committee: individuals, elected officials, organizations, and members of canoe clubs and neighborhood boards.[45]

The committee and project coordinator developed a plan that drew on water quality research developed from the mid-1970s by researchers from the University of Hawai'i and elsewhere. The plan proposed a number of clean-up projects, including the creation of debris-collecting booms for the mouths of tributary streams that feed the Ala Wai, the installation of filters in storm drain outlets on the roads, and the creation of erosion-control plantings such as taro patches.[46] The latter initiative makes use of the *ahupua'a* practices that once structured Waikīkī, and indeed, restoring such a model of resource management girds the work of the Ala Wai Watershed Association (A.W.W.A.), a citizens' group that implements projects outlined in the Ala Wai Canal Watershed Water Improvement Project plan. In 1998 and 1999, the Hawai'i state legislature adopted the plan and appropriated nearly $1.2 million for it. A.W.W.A. has utilized some of these funds, along with additional monies granted by the U.S. Environmental Protection Agency, "to improve water quality and foster awareness of *ahupua'a* concepts through community-based stewardship of the Ala Wai watershed."[47]

The epigraph that began this chapter literally and figuratively describes the work of the Ala Wai Canal: it destroyed wetlands, lives from Waikīkī flatlands to the shore, and now collects toxins and trash and channels them into the sea. In the next chapter, we will explore more "runoff" from the canal: the effects of real estate development in Waikīkī after the Ala Wai. Specifically, we will investigate the incursion of the military and leisure industry at Kālia and explore how hierarchy and money empowered some in the area at the expense of many.