

## **Brownfields in “Paradise” Kekaha’s Legacy of Industrial Agriculture**

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Hawai'i's “Garden Island” of Kaua'i is blessed with ample sunshine, and the top of its dormant volcano, Mt. Waiale'ale, is considered one of the wettest places on Earth. The island is very fertile. For centuries native Hawai'ians grew their sacred taro, or “kalo” there, even on the arid west side. When Europeans and European-Americans arrived in the late 19<sup>th</sup> Century, they found this area—as well as other swaths of Hawai'ian land—ideal for growing sugar cane for export. In Kekaha, on the remote west side of the island, they processed the cane in a sugar mill complex that also prepared herbicides, fungicides, and pesticides for application on plantation fields, and they and treated seeds before planting.

The plantation halted production at the turn of the 21<sup>st</sup> Century, and the Kekaha Sugar Mill and its associated maintenance sites shut down after a century of operation. It now stands as a classic brownfield, in the midst of the residential community that grew up around it. Kekaha, a non-self-governing district of the County of Kaua'i, is home to more than 3,000 residents, largely of Asian and Native Hawai'ian descent. A significant fraction speak Hawai'ian at home, and at least two schools teach in the native language to serve Kekaha's large Ni'ihauan population.



**Kekaha Sugar Mill main building**

Physically neglected by a string of private owners and the state for more than a decade, the mill site re-entered community consciousness this Spring, when the mill's private owners began asbestos abatement activity that resulted in numerous health-related complaints by Kekaha residents to the State of Hawaii Department of Health. To raise public consciousness, the community group E Ola Mau Na Leo O Kekaha organized a Toxic Tour in May, beginning a community awareness process that has grown beyond a single organization's effort into one that includes parents, teachers, youth leaders, and most importantly, the local native Hawaiian organizational leadership. In this process, residents have been learning how demolition, cleanup, and reuse are regulated. Though Kekaha is a backwater still influenced by more than a century of "plantation culture," community members are gradually empowering themselves and developing leadership and a pro-active vision for revitalizing the blighted property in the core of their community.



**Site Map from Targeted Brownfields Assessment**

Only recently the community discovered that, in 2005, U.S. EPA had commissioned and released a Site Inspection report on the Kekaha Sugar Mill Complex, conducted by the Hawai'i state Department of Health's Hazard Evaluation and Emergency Response (HEER) Office. EPA had concluded that the site—including the mill itself, its former herbicide mixing area, the carpenter and paint shop, the auto shop, the seed-dipping plant, the Mill Ditch, and the settling pond to the north—scored high enough on the Hazard Ranking System to qualify for EPA's

“Superfund” National Priorities List, the most hazardous contamination sites in the country. However, EPA deferred listing on the understanding that the responsible parties would work cooperatively with the Department of Health to characterize and clean the site.

While the site was defined by a common set of activities, it is currently divided into several parcels, each with a different owner and set of property managers, contractors, and consultants. The northernmost parts of the site are owned by the state, with the mill site and carpentry shop area owned by private parties.



**Generator Site**

Little happened, however, until January 2010, when a state agency submitted a draft Environmental Assessment to the Hawaii Department of Health for its proposal to install emergency diesel generators on a 3-acre triangular parcel of land that overlaps with the Kekaha Sugar Mill's Former Herbicide Mixing Area. The generators were intended to expand the local energy infrastructure to serve the increasing energy and pumping needs of the region's agribusinesses, and to provide back up energy to run flood-control pumps for Kekaha. The state Agriculture Development Corporation (ADC), which is responsible for managing Hawai'i's former sugar plantation land, assigns its land and water management duties to the Kekaha Agriculture Association—a privately-run cooperative led by global agribusiness land lessees such as Syngenta, DuPont subsidiary Pioneer, and BASF. Expanded infrastructure will allow for greater capacity to test and develop genetically modified seeds, as well as new herbicide and pesticide compounds on ADC's public land.

In response to the findings of the April, 2010 Environmental Assessment, the HEER Office asked the ADC to conduct a Phase II Site Assessment, published that October. ADC divided the three acres into three decision units and used multiple-increment sampling to develop average values for each. In one of the decision units it found bio-accessible arsenic at concentrations above the states' environmental action levels (EALs), which were the same for both unrestricted (residential) and commercial/industrial use. ADC also found that the total equivalent dioxin level was above the state's EAL for unrestricted use in all three decision units.. These studies were conducted with no public outreach.

Next, in late 2010, EPA sponsored a Targeted Brownfields Assessment (TBA) in support of Department of Health in its work with ADC on the Generator Site and a private developer in its plan to redevelop the main sugar mill property. The TBA, which was released in April 2011, sampled sediment in the Mill Ditch between the mill and the ocean, and it sampled six decision units around the perimeter of the generator project area. Two of the decision units showed bioaccessible arsenic above Tier I standards and Tier II residential standards, and one, along an upland irrigation ditch, exceeded the state's unprotective Tier II dioxin standards.

Finally, in July 2011 the ADC submitted a Remedial Action Work Plan (RAWP) to HEER for the Generator Site, including the perimeter units. It proposed, instead of an earlier plan to excavate some contaminated soil, 1) to cover portions of the site with four inches of gravel and 2) use boulders and a cattle fence to keep vehicles and people out.

ADC and HEER have tentatively agreed that industrial (not the more protective residential) exposure standards should be used. They have used a sampling method that probably



**Mill Ditch**

averaged away contamination hot spots. They are using less protective arsenic standards than were in effect when the investigation began. They are using less protective dioxin standards than elsewhere in the country. And still, for an area along an irrigation ditch where dioxins exceed HEER's weakest standards, they propose no removal or treatment.

Only when the community asked for a public comment period did HEER arrange a public meeting on the proposal. Strong public opposition and growing public awareness of this proposal is testing the state's commitment to environmental protection, not only at the generator site, but for the mill site generally. Already, community leaders, primarily parents, fishermen, surfers, and environmentalists, are mounting a campaign for a higher level of scrutiny for the mill demolition and the rezoning the entire site.

Community concern at the generator site and mill is rooted in the obvious recognition that the mill is in the middle of a residential community with multiple schools. For example, the Mill Ditch, historically contaminated by mercury from the mill, bounds a Catholic School and sometimes floods onto that property.

The generator site is across the Kekaha Road, but it's adjacent to a Hawai'ian charter school, Kula Aupuni Niihau A Kahelelani Aloha (KANAKA PCS), which leases space in the former plantation administration building. With about 50 students, this K-12 school was the first dual-language English-Hawai'ian school anywhere. Furthermore, it consistently meets conventional academic achievement standards.



**Kula Aupuni Niihau A Kahelelani Aloha**

When they conducted their studies of the generator site, none of the agencies—ADC, DOH, or EPA—knew of the presence of the school. After activists informed EPA in late September, it passed the information along to DOH. DOH dispatched a team to sample the schoolyard, but surprisingly it did not inform community members despite much conversation

between DOH and community members on the need for transparency and timely updates. Community members want more. They are pressing for more rigorous standards to ensure that the cleanup at the both the mill and generator site recognizes that children are present.

Community members have also explained to regulators the ditch system and their physical interaction with it. Built to irrigate and drain the sugar fields, the ditches are fished by local residents, including children. Children living near the ditches come into contact with both the water and sediment. The ditches are visited by endangered bird species. And the Mill Ditch, usually bermed at the coastline, apparently to prevent the release of agricultural chemicals into the ocean, is opened to the ocean during significant rain events to prevent the town from flooding. Still, residents report, in heavy rains the mill ditch floods over a wide expanse of land, including the adjacent Catholic elementary school and playground.



**Community meeting in October, 2011**

Because these properties are near homes and schools, activists want them cleaned to levels suitable for residential use. Perhaps more important, they don't want new industrial uses to replace the old mill and herbicide mixing area. While the ADC notified two community members about its plans to place generators on the site, the Kekaha community was not formally or officially consulted. When community members have questioned installation of the generators, more than one state official has warned this project will be the community's best and only chance to get contamination at the site addressed. This "take it or leave it" approach has been a common narrative that potential developers and employers have told this historically disadvantaged community.



### **View from the Kekaha Community Center**

On behalf of a group of local residents, CPEO reviewed the Remedial Action Work Plan. We concluded:

*The fundamental problem with the Remedial Action Work Plan is that it proposes **no** remedial action, just the placement of gravel on contaminated soil and the installation of a cattle fence and boulder barriers. We believe the presence of the reported levels of site contaminants—near a residential area, adjacent to the Kula Aupuni Ni`ihau A Kahelelani Aloha school, on the edge of a surface-water ditch, and with both passenger and heavy vehicle traffic—requires some level of active cleanup, such as the excavation of hot spots and either off-site disposal or on-site consolidation and stabilization. In addition, we believe additional sampling may be necessary to identify those hot-spots.*

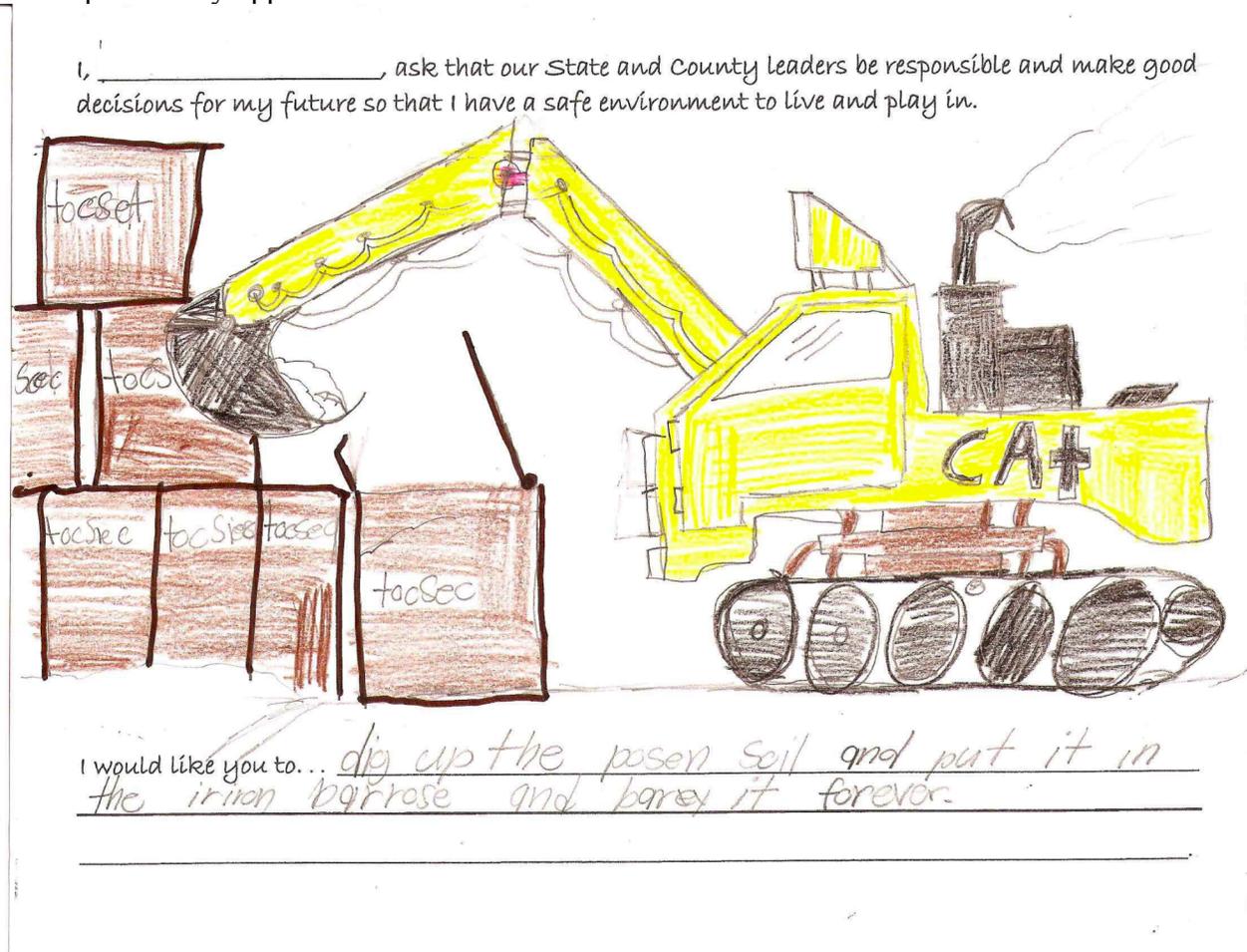
CPEO offered the following specific criticisms of project proponents:

1. They assume an industrial use, which means that a weaker exposure standard is applied.
2. By combining multiple samples for the main generator site into three samples, each for one-acre decision units, toxic hot spots may have been missed or averaged away.
3. During the course of the investigations of the project area, Hawai'i Department of Health weakened its exposure standards for arsenic.
4. Hawai'i has less protective exposure guidelines for dioxins than U.S. EPA and numerous other states.

The owner of the main mill property has sought a demolition permit and is preparing to conduct asbestos abatement. But as far as the community knows, there are no plans for site characterization and remediation. To ensure that it is cleaned up to levels that protect its neighbors and enable the property to be developed for residential use, vegetable gardening, and other sensitive uses, it is essential that it be enrolled in a regulatory program that ensures community engagement.

The demolition permitting process in the county of Kauai is no such program. It is a simple form that does not take into account the razing of a contaminated site such as the Kekaha Sugar Mill, although the Comprehensive Zoning Code does empower the Planning Department to exercise discretion to protect health and safety of the surrounding community.

Cleanup or remediation of these properties should not have to depend on new development, and in particular it should not require that the community accept forms of development they oppose.



**One of more than 200 remedial workplans drawn by Kekaha's children**

CPEO believes that the best way to protect the Kekaha community and maximize beneficial reuse is to place the entire mill complex, including the generator site, on the Superfund "National Priorities List" (NPL). The Superfund law, the Comprehensive Environmental

Response, *Compensation*, and *Liability Act* (CERCLA), gives EPA the authority to identify responsible parties and hold them accountable for cleanup, even if no redevelopment is on the horizon. Listing would also ensure that cleanup standards are at least as protective as those established by EPA nationally, even where Hawai'i's numbers are less protective. And CERCLA contains a strong mandate for public involvement. It would make the community eligible for a grant to hire its own technical consultant.

Kekaha is an environmental justice community whose interests and vision have generally been ignored by state and county government. While every effort should be made to make state and county government more responsive, the best way to address the Kekaha Mill Complex is to place it on the NPL. That won't solve the community's problems, but it will give the people who have been impacted by contamination and blight in Kekaha the chance to protect their families and shape their future.

Looking forward, Kekaha is no longer just a community of environmental justice *victims*. Residents are educating themselves and speaking out. Teachers, community members, and parents created a civic engagement curriculum for children that resulted in over 200 drawings and a ballot exercise that allowed students to discuss and weigh the options for addressing a current, real-life toxic challenge in their community. Most of these young people will have to live for decades with decisions that are being made by their elders today.

## WHAT DO YOU WANT THE STATE TO DO WITH THE POISONOUS OR CONTAMINATED LAND IN KEKAHA?

(PLEASE MARK 1 CHOICE ONLY)

- 5  OPTION 1: PLACE STONES/GRAVEL ON LAND
- 34  OPTION 2: PLACE POISONOUS SOIL IN SEALED CONTAINER
- 192  OPTION 3: TAKE POISONOUS SOIL OFF OUR ISLAND
- 49  OPTION 4: Came up with their own option or a similar option such as...  
 of the 49  
 35 wrote solutions that would take off our island

### How Kekaha's kids voted

*I would like to thank Phoebe Eng, Peter Strauss, and the community of Kekaha for their help in preparing this report.-LS*