Land Use Commission Meeting June 9-10, 2021

RE: Testimony SP06-400 Pohākea Quarry (Maui)

To Consider Hawaiian Cement Pōhākea Quarry Application for 15-year Time Extension Request for Special Use Permit to Continue Operation of Pōhākea Quarry in the State and County Agricultural Districts at Mā´alaea, Island of Maui, Hawaı´i; TMK: (2) 3-6-004:007 (SUP1 2006/0001) (CUP 2006/0001)

Comments regarding a request for extension of permit to continue operation of the Pohakea Quarry.

This SUP/CUP is for an expansion of the Pohakea Quarry and Base Course Operations beyond the original 14.8 acres in the State and County Agricultural Districts. The expansion area consists of an additional 64.4 acres. The original 14.8 acres were established through SUP2 96/0013 and Ordinance No. 3232 (Conditional Permit) which also included green waste composting and concrete re-cycling operations.

A point of timely public access to records:

The Commission urges testifiers to submit comment 48hrs prior to meetings to provide commissioners sufficient time to review them (in this case, by June 7th or 8th). That suggests materials be available to the public with sufficient time for review as well. The relevant documents appear to have been uploaded on or just before June 7th (it is unknown when LUC received the documents from the Maui Planning Department); a short window of time for the working public. Hence, I went looking for the documents through the Maui County Planning and Permitting KIVA database. According to the KIVA permit site SUP1 2006/0001 and CUP 2006/0001 expired in December 2009. The KIVA system (http://kivanet10g.co.maui.hi.us/kivanet/2/) fails to document any subsequent actions or outcomes including interim extensions and the current permit extension request. This is not a reflection on the LUC but puts our County in an embarrassing position. COVID-19 conditions aside, surely, the County online permit application system does not take 11 years to update?

Regarding outdated EIS documentation and Order condition responses:

The original application was made 15 years ago with the bare minimum of environmental assessment (see below; regarding the biota and natural flows of Pohakea). For this reason alone, the existing permit (and extension request) should be null and void. We now require subdivisions to reinitiate EIS procedures when their permits have lapsed for too many years due to changing island conditions; the same should apply to Hawaiian Cement/Pohakulepo, LLC. We have also learned a great deal more regarding our natural ecosystems and island hydrology in the past two decades, and with an increase in Hawaiian language speakers, have a much more nuanced understanding of Hawaiian language resources, TCPs (traditional cultural properties) and Hawaiian culture. It is from this context that the current application should be reviewed.

On July 18, 2019, the Maui County Planning Commission received a letter from the LUC request for comments for a 10 year time extension for continued quarry operations for Hawaiian Cement Pohakea Quarry. The LUC pointed out the failure of Hawaiian Cement to submit annual reports addressing the Order conditions attached to the original permit for eight consecutive years. A limited extension was approved by LUC through December 15, 2019, assumedly to provide the company with an opportunity to correct that error. Based on this documentation, it appears the quarry has been operating without a permit for the last 18 months.

According to the applicant submittals its certification of liability insurance expired on 1/1/2020. It is unclear if the NPEDS permit continues to be in limbo, has expired or was renewed to be compliant in 2021.

Regarding the state of defunct equipment on site:

The stockpiling and "composting" of old machinery and vehicles is not covered under the SUP, CP or CUP permit.

Over the years, the property has amassed a large amount of dead machinery and large vehicles, including a possible bulk fuel tanker observed in 2009, and created a metal graveyard on the north side of the parcel (over and beyond typical abandoned vehicles found on former cane lands). It is unknown whether this junk yard remains since the fire of 2016. If so, it is 1) unpermitted; 2) corrosive and abusive of this 'āina; 3) overgrown by brush and grass; and, 4) a dangerous hindrance to fire fighters during mass burn events such as those that occurred in 2010 and 2016.

There does not appear to have been any monitoring program for the proper disposal of fuel, oil, and other chemical compounds from active or abandoned equipment at the site. This is a joint landowner/lessee permit extension request. Given the location of the metal graveyard within/near one of the tributary channels of the Pohakea flood plain, and its proximity to electric lines, it should be a requirement for this applicant that a chemical mitigation plan be put in place, that the "junkyard" area be tested for soil contamination, and the property cleaned of metal debris and contaminants prior to any permit extension approval.

Regarding how much of TMK (2) 3-6-004:007 actually remains to be mined:

Current excavation by Hawaiian Cement has moved substantially towards the back (west) boundaries of the property owned by Pohakulepo Recycling, LLC and they are now proposing to continue excavation and grinding on the remaining 64.4 acres of the parcel for at least an additional 10 years (with the option to extend). The current request and reports submitted by the applicant states that in the last extension in 2010-2011 they "accessed approximately 10 acres" beyond the originally permitted 14.8 acres. However, they give no accounting of the acreage subsequently mined from 2011-2020. The aerial images submitted by the applicant, as well as those in the County's aerial pictrometry layers, do not reflect actual quarry acreage. An on-site or drone evaluation of the true parameters of the mined acreage is recommended before any decision on this permit extension request is made.

This is also an area where property boundaries have not been well-defined on the ground in the past, leading to encroachment. Those who are familiar with the boundaries have been watching with a wary eye for the last few years as Hawaiian Cement continues to push back into the gulch. It would be incumbent on the approving agencies to require a boundary reverification survey to confirm where the legal boundaries to the west, north and south actually are, the total acreage currently mined out, if indeed there is any additional acreage to be destroyed within the parcel, where exactly that might be, and what impacts that might have on hydrologic, ecological and archaeological features. A verified survey in consultation with all adjoining landowners should be completed to properly locate the boundaries with copies provided to each landowner and filed with the LUC/County prior to further quarry action. Allowing the totality of the parcel to be mined has the potential to permanently cut off access to and land lock adjacent land owners to the north and west.

Regarding the biota and natural ecological flows of Pohakea valley:

In the larger picture, it is concerns for ecological and cultural sites damage to Pohakea Gulch-Maalaea that should, by 2021, be placed at the forefront of this discussion.

No parcel of land exists in a vacuum or disconnected from adjacent sites and resources, particularly on an island. There is an overall lack of understanding in the application of the connectivity of TMKs (2) 3-6-004: 007 to adjoining land and water (fresh and ocean) features and conditions, to flora and fauna, historic sites, adjacent residential communities (Maalaea), or the impacts of a project that severs that connective tissue.

No vegetation or faunal survey was done prior to the initial permit application in 1997 or since. Given the number of rare and endangered species, along with a rare remnant lowland wiliwili (*Erythrina sandwicensis*) forest in and behind the "modified boulder field' (SPHD Site 50-50-09-6063), as well as, koaia (*Acacia koaia*), ma'o hau hele (*Hibiscus brackenridgei*), *Achyranthes splendens*, kulu'i (*Nototrichium humile*) and *Abutilon menziesii* documented in the 1980s as present on immediately adjacent parcels, this should have been done. Low elevation dry forests are one of the rarest ecosystems in the islands. In Central Maui, only Pu'u o Kali persists with any great integrity (the fat red seed type at both sites suggests at one time they were connected as a single wiliwili forest across the isthmus, as was Pu'u Kali and Pu'u Hele, the mo'o parents of the child, Pu'u o inaina). Most of these species are not visible until after winter rains and are best observed from March through May.

In 2009, the endemic Orangeblack Hawaiian damselfly, *Megalagrion xanthomelas*, was rediscovered on Pohakea stream. This lowland species which occupies a wide range of habitats was thought to be extirpated from Maui and had not been seen for 100 years. This species is extremely rare on Maui (known to only three sites with only a few individuals). Populations occur primarily below 200ft (about the same elevation as the quarry) with a range of 0 to 2,000ft (Polhemus and Asquith 1996). This damselfly was listed as a Threatened and Endangered species under the Endangered Species Act in 2016, as S1 S3 Imperiled in Hawai'i, G2 Imperiled and G3 Vulnerable by NatureServe and Vulnerable by the global IUCN Red List. Its biggest threats are stream alternation and stream dewatering (including those streams classed as seasonally

"ephemeral"). To quote a recent announcement (May 2021) of a rescued population of this rare species on Oahu "Scientists say the damselflies play a key role in Hawaii ecosystems, providing food for native birds, as pollinators of native plants and as recyclers of nutrients. They also help control mosquitoes, midges and other pest insects." Maintaining natural stream bed courses, even where water is only seasonal and classed as ephemeral, provides quality habitat for aquatic fauna, some of which depend on winter flood triggers to complete their life cycles. Disruption or alteration of the branches and main stream corridor at Pohakea directly impact known habitat of the Organgeblack damselfly and any attempt by this species to recolonize downstream reaches or the coastal wetlands of Kealia.

Nene (*Branta sandwicensis*) are visitors to the ridge and slope areas above Pohakea gulch. USFWS documents two protected seabird species, the Threatened 'a'o (Newell's Townsend's shearwater, *Puffinus aricularis newelli*) and Endangered 'ua'u (Hawaiian petrel, *Pterodroma phaeopygia sandwichensis*), as well as the Blackburn's sphinx moth (*Manducca blackburni*) and Hawaiian hoary bat (*Lasiurus cinereus semotus*) in relative proximity to this parcel.

We note that a majority of agencies had "no comment" in regards to quarry permit extension requests over the years. In 2015, NRCS and the ACOE evaluated Pohakea stream and its tributaries as an "erosional feature" leading to the bulldozing of lower channels (Spencer property; Ohana Kai subdivision) and demonstrating a lack of understanding about the historical and current linkages between Pohakea stream and federally protected Kealia fishpond.

Prior to diversion of water from Pohakea and an unnamed tributary further south by the plantations in the late 1800s, these were perennial water sources. Boundary Commission reports document the presence of lo'i kalo (wetland taro patches) along Pohakea stream, a planting method that required plentiful freshwater and serving as evidence that the stream once held permanent flows. In 1992, a Land Use Commission district boundary amendment decision recognized that "surface runoff from the [p]roperty [makai of the quarry] flows in a west (mauka) to east (makai) direction through two drainage gulches_[small tributaries] ...and Pohakea stream, which flows into Maalaea Harbor and Maalaea Bay." USGS maps from the 1960s to the present record two of these features using a solid blue line indicating a stream. Photographs taken during a 1994 biological stream assessment conducted as part of the EIS process for the Maalaea power plant (Englund and Ness, 1994) clearly document the connection between the stream and the coast, as well as the intact streambed just above Honoapi'ilani Highway. Aerial photographs from USGS plant surveys provide further evidence of the connection between the drainage gulches, Pohakea stream and Kealia. All three of these channels continue to carry water to the coast during heavy rains.

As with many streams in Maui, Pohakea brings together and disperses several small tributaries at various points along its trajectory from the back of the valley to its gathering point at TMK (2) 3-6-004:007 (see Exhibit A, top image; two small tributaries and the main streambed marked in light blue). Culverts under the road at Honoapi'ilani Highway facilitate movement of water from the main Pohakea streambed to Kealia fishpond and salt ponds (Sterling 1998; now Kealia Pond National Wildlife Refuge). Surface flows from Pohakea gulch during high rain events reach

Maalaea and Maalaea Bay which is part of a coastal water quality monitoring program administered under DOH Clean Water Branch and studied by a range of agencies. The bay was formerly known for its unique biota and coastal subsurface fresh water springs fed by perennial flows from Pohakea and Waikapu but is now severely degraded.

Kealia Pond National Wildlife Refuge was established to protect endangered waterbirds. Once a thriving loko ia, the current wetlands are influenced by the tides and depend on receiving seasonal surface water for Waikapu and Pohakea stream. Decisions regarding both water bodies therefore fall under the authority of the US-ACE, EPA, USFWS, DOH and DLNR-DAR/DOFAW. The lack of perennial water flows does not reduce the significance of this connection, nor agency obligation to protect pursuant to federal, state and county law. Cyclical flashing water patterns are an important element in the survival of some of Hawai'i's rare stream fauna. Reduced seasonal freshwater inundation and year round seepage compromises the health of the makai wetland and coastal reef ecosystems. Polluted or soil/dust laden runoff from the project area further jeopardizes the quality of the Refuge, including the potential to aggravate botulism and midge outbreaks in the Pond of which there have been several in the last decade.

Regarding stream setbacks and alterations:

Streams in Hawaii are flashy, rise quickly, and regularly realign, as harshly demonstrated by Wailuku (Iao) and Waihee streams in the last five years and in historic map records held by the Bailey House Museum. In both cases, their stream beds moved well beyond a 25ft buffer; in at least one section of Waihee, the shift could be measured at more than 50ft with river rock strewn far more broadly beyond the new channel. Similarly, Pohakea stream under natural conditions moves, changes course, and disperses broadly in its low elevation reaches fluctuating more northerly or southerly depending on the year and the intensity of rains. A waterfall rock face and stream channel (now mostly dry) that show evidence of having carried powerful amounts of water sits at the back of Pohakea gulch.

Condition 17 of this permit requires that "a 25ft buffer be maintained along the northern boundary of Pohakea Stream and that the bed or banks of Pohakea Stream shall not be altered without an approved stream-channel alteration permit prior to construction." The features across the length of this streambed (as opposed to the isolated portion within the Pohakulepo LLC property) clearly indicate a 25ft setback is insufficient to protect the lower reaches of this water channel. The higher the cut away (estimated at 50ft or more towards the back of the quarry), the riskier such a narrow buffer becomes. A spillover during a flood event could easily breach and undercut the buffer and cause collapse of the streambed. Water ponding from mauka overland runoff and tributary runoff into the quarry during flood events are annual occurrences. Given the fast rising character of most streams in Maui and expected increases in flood events over time, minimum setbacks should be 100-150ft to allow natural streambed flex and provide additional buffer for successive erosion events.

This SUP/CP/CUP has never allowed for the alteration of a stream bed, yet, at least one tributary of Pohakea has been terminated by the quarry (readily visible in aerial images), and has been known to be the source of water flooding into the quarry during major storm events (see Exhibit

A, top image). No action has been taken by any agency despite the fact that these channels have never been "erosional features," either historically or in the present day (convenient language that sidesteps additional permit requirements and responsibility for the care of natural streambeds). NOAA has predicted that flood events, along with hurricanes, will increase in regularity and impact in our islands with Climate Change. Expansion of the quarry will only exacerbate such conditions.

Additionally, Condition 8b of the original permit states that no increase in stormwater runoff will be allowed onto the State highway right of way; however, this condition does not address any runoff carrying silt or debris into Maalaea bay through the ditch and culvert system under the road that empties there.

Over the years, many of us have observed that the larger the area of exposed soils on agriculture or construction sites in Maui County, the greater the risk of soil loss and downstream sedimentation in gulches and on nearshore reefs. Accumulated sediment within Pohakea water courses during the dry season are carried downstream in subsequent seasons and during high rainfall events. Buildup in the retention basins should be removed annually and the natural contours and boulder topography retained to maintain water quality at the makai end of the system (Maalaea and Kealia) in order to protect native biota, particularly damselfly larvae that may establish themselves in these corridors where seasonal pooling or intermittent water flows occur.

Regarding dust and noise drift from active quarry work:

Particulate matter (dust and ash) readily travels across the distance between the gulch and the fields makai of Honoapiilani highway and into regions upslope and into the gulch, just as the movement of cane ash and the red dust from Central Maui's opened fields and the slopes of Kaho'olawe have demonstrated cannot be contained in the strong Moae winds. The DOH found descrepancies in ambient air quality impacts in 2008 and expressed concern over hours of operation. There is no indication in the current application if monitoring will occur. It should, particularly on high wind days, as it presents a health issue for downwind farmers and inhabitants. Noise traveling from the quarry is significantly amplified inside the valley due to the narrow shape of the gulch. Prolonged, daily noise has the potential to disrupt the natural behavior of endangered birds such as Nene.

Regarding wahi pana and archaeological sites:

The quarry does not exist in isolation from surviving wahi pana (storied places), documented and undocumented sites, in the same way that it does not exist in isolation of the larger ecosystem in which it sits. The original and subsequent archaeological review failed to take into account the diversity of archaeological features known to exist on adjoining properties and along ridgelines that make up the Pohakea-Maalaea complex. These sits are impacted or disrupted by the massive cut away of the quarry, some of which rest immediately on or near the western boundary of the parcel, or whose stability would be undermined should the quarry expand either south or north. Boundary Commission testimonies record that "Ili o Pohakea" included the entire valley and fishing rights at what is now Maalaea harbor. Award 3390 to Paele claimed the entire ili, bounded to the south by the po'alima patches. Another award to Paele LCA 3390; R.P. 3705; Pohakea Wailuku; 1 ap. .7 Ac., was located in the front of the valley about where the quarry property is now located and included 22 lo'i. Numerous house sites, shelters and kia'i pohaku (guardian stones, ahu, akua stones, etc) on adjoining parcels indicate a once thriving community. From the turn of the 20th century, and after the diversion of water from Pohakea stream for sugar, it became primarily a cattle grazing place until the quarry was opened in 1997 (following the final destruction of the Pu'u o Hele quarry site).

Walker describes the area surrounding Maalaea as having numerous shelters, house platforms, and low walls (at least 45 were noted in one area; Walker, 78). House sites above the quarry and Boundary Commission records of taro patches indicate settlement extended into the valley of Pohakea. In Sterling (1998) is recorded Walker site 1, 105 a quarter mile from the village of Maalaea at the base of the foothills of the West Maui mountains a large walled heiau in good condition despite occupation by cattle.

The SHPD review of this property identified 23 historic features at seven sites in 2008, but it must be noted that by the time the surveys were conducted the property was heavily overgrown with vegetation and that Hawaiian Cement had been operating in the gulch for some time. It is impossible to know how many features may have been destroyed in the ten years prior. Site 50-50-09-6063 contains 16 features, including what was described by SHPD as a "modified boulder field." This description downplays its importance and should be questioned. Boulder fields in Hawaii typically occur under three conditions in the islands – storm/flood water induced in the riparian areas of large streams such as what occurred within the trajectory of Waihee stream in 2018; volcanic boulder fields such as near Halemaumau Crater on Hawaii Island; and tsunami induced boulder fields such as those that occur along the shorelines of East Maui's south side. A fourth type created by the "birthing" of stones from the earth due to highly localized earthquakes is known to Southeast Asia but has not been documented in Hawaii to my knowledge. The SHPD assessment fails to recognize the typical nature of such features – widely spread and uneven in distribution. A fifth type of "boulder field" in Hawaii arises from a misreading of the landscape, of disassembled ancient Hawaiian heiau structures caused by earthquakes, trees that establish on a structure and pull apart the stones, years of cattle walking on them, or quite often, the removal of stones to build other structures, particularly cattle walls such as historic feature 50-50-09-6065 which is the makai segment of an extensive wall system mauka of the parcel. Thrum (1909:44) noted: "[a]mong the more prominent of the doubtless many heiaus once existing on the island of Maui little information is now obtainable beyond that handed down by tradition, nor is there much in evidence to mark their sites, so complete has been their demolition." This does not, however, mean that these heiau are gone. It is the sites themselves that are sacred; the heiau codifies that sacredness. Both Walker and Thrum record the names of many heiau that were not found (and often assumed to be destroyed) in their time but that have been rediscovered in recent decades. Walker in 1931 and later archaeologists such as Connolly (1973) described the now recognized luakini heiau, Kealakaihonua (Waihee), as "a pile of rocks," and Kalani heiau

(Makena) has been described by archaeologists as "reduced largely to a shapeless pile of rocks" where neither was an accurate acknowledgement of their significance.

In 2010, the congregated boulder field at Pohakea had a steep, sloped west face (relative to a destabilized site), and a rectangular outline indicative of a built structure. Moss rock dominated the field of stones prior to the last fire, a characteristic regularly observed in pohaku of the type found in ancient sites on Maui but far less often in stream-created boulder fields, and mostly absent in shoreline boulder fields. In the late 1990s, an old Hawaiian cowboy and manaleo (native speaker) residing at Lunililo Homes on Oahu talked about his work ranging cattle in Pohakea Gulch in the 1930s with me and described such a structure in the mouth of the valley about 100ft from Pohakea stream. Further evidence of the flow of human activity in the area is found in the story of Pi'ilani (Moses Manu, *Ka Nupepa Kuokoa*, Feb 9, 1884 in Sterling 1998:21 no. 23) which recalls "When Kihapiilani and his wife were on the road at the site of that rock Unula [Unu'ula], it was there that they began to descend down to Kapoli. They came to the plain of Puhele [Pu'u Hele] and just before this place they met with several people who were going to the seas of Kama'alaea carrying bundles on their backs. These two first gave words of greeting as did likewise these people. Kihapiilani asked, "Where are you coming from?" These people answered, "from Kalua here. We are going down makai to the shore to trade some food."

The "modified boulder field" is clearly visible from aerial pictometry images available to the County and to the LUC (Exhibit A attached; it should be noted the images are outdated and do reflect the current expansion of the quarry). The site measures an estimated 75 x 90ft with what appears to have been an thick wall or narrow platform extending from the west corner of the site running E/SE estimated at least 100ft in length. While we may not be able to determine if this is truly a heiau site based on current knowledge and technology, such a structure so near the moku boundaries of Lahaina and Wailuku makes sense (similar to Walker site 1; in Sterling, maps [pg16 and 62] suggest the moku boundary touches Pohakea stream at or near TMK (2) 3-6-004:007). It would behoove the LUC (and SHPD) to err on the side of caution with a wide buffer to this portion of the parcel so that future generations of Hawaiians and the broader community are not further short-changed of the important cultural heritage the complex represents.

SHPD did show some concern in 2008 and subsequent years when other historic features were destroyed by Hawaiian Cement during quarry work. In a letter dated April 1, 2008 (DOC No. 0803JP21), the SHPD noted the bulldozing of several significant archaeological features and full time archaeological monitoring by a qualified archaeologist, one for each piece of operating equipment, was recommended for any ground altering work on the parcel, and outlined in the monitoring plan. According to the letter, no notifications for the onset and completion of projects were submitted to SHPD since 2008 indicating whether these conditions were met and implemented. Subsequent correspondance by the contract archaeologist requested to reduce the monitoring requirements established in 2008. The 2018/19 report merely states that it "concurs with the conditions" defined by the order and SHPD but fails to indicate the number of days that a qualified archaeologist was on site or number of active machines per day that required monitoring over the last ten years. Despite this, it is not impossible to see Paele's footprints on the land. LUC has the ability to prevent further destruction of any remaining

features and the corridors that connect features across boundaries and space in this portion of the valley by extending the buffers for these sites to retain their connectivity to each other and adjoining parcels.

Regarding quarry mitigation:

It is worth noting that not a single mining/quarry level mitigation project in the history of the State of Hawaii has ever been required to do site recovery as a condition of permit. Pu'u Hele, located just eastward of the mouth of Pohakea Gulch and the Hawaiian Cement quarry is a prime example (the decision to fill the pit with construction debris was an after the fact process). Prior to 1935, Puu Hele, a once famous wahi pana (an a recognized mo'o) was a celebrated cinder cone. It was said that "if you hadn't climbed Puu Hele you hadn't seen Maui." That wahi pana was not just leveled, but further humiliated by continued quarrying that left a deep crater where the Pu'u once stood and then in 1996 was turned into a construction dump site. While the landfill is now close to the height of the original hill, would that Pu'u Hele had been protected, we would have preserved the unique ecology and hydrology (mo'o are connected to water) of the cinder cone, a stunning viewplane of the whole of the Central Maui isthmus and the waves of dunes that the district was famous for in context (before it was carted off to build beaches and make cement for Waikiki).

There is no indication that Maui County will change that status quo. The existing permit did not require a mitigation plan. The quarry has already left a large cut-away scar at the front of the gulch which threatens to be a major erosion problem for Maalaea and Kealia in the future and could cause a collapse of the streambed if allowed to get any closer to that portion of the gulch. Infilling with construction waste had cautionary issues related to infiltration and long term water quality. How does one begin to restore such a wound, or protect the edges from further erosion? Do we even have qualified, skilled mine reclamation practitioners sensitive to Hawaiian flora and cultural landscapes in Hawaii?

Regarding the conflict inherent in Agriculture zoning and Mining:

The parcel is zoned Agriculture. Quarrying/Mining is not agriculture. Doesn't matter how you stretch it, despite its encumbrance under HDOA and DLNR statutes and rules. Not a lick of food, or any product that supports the growing of food comes out of that property and never will now that the top soil is gone down to bedrock, despite the fact that it was once viable taro farming lands. We note the original permit required a CP and CUP in addition to the SUP in recognition of this conflict in agriculture land use.

The site abuts some of the richest agricultural lands on Maui which continued growth of the quarry threatens (dust, erosion, acidic runoff). The recent Hawaii News Now film, *Catsup and M&Ms*, lays out just how critical current land use decisions are for our future survival. A discussion of conflict of land use in regards to county and state food security needs should be part of BLNR's overall reassessment of priorities for Central Maui lands. Our Central Maui sand dunes, the cinder from Pu'u Hele, and the rock material from Pohakea gulch have served Oahu development and beach enrichment for decades far more than our own island.

Community awareness of the fragile resources of Maui has increased tremendously over the last decade. The understanding that we have a compelling interest in protecting our best agricultural lands and soils to put food on our tables, in reducing soil and polluted runoff in our coastal fisheries, protecting our fresh water aquifers from overpumping or polluted infiltration, and protecting our storied landscapes is widespread. Maui residents are calling for a moratorium on new hotel construction for good reason. We live on finite islands with finite resources that have a very real and limited carrying capacity. It takes up to 500 years to recreate an inch of soil. What timeframe do you imagine it will take to restore the removal of soil to a depth of more than 50ft (estimated at the back of the quarry) and the ecological functions that an intact soil structure (as opposed to construction waste) and island biome provides? Rocks are a finite resource that are not replenished except by extreme geologic events. It is time to reprioritize real farming on agricultural lands over activities such as mining that leave our island's natural resources eroded beyond their capacity for recovery for lifetimes to come.

Our parents and grandparents taught us to leave the aina better than when we came. Perhaps, we can begin here.

Penny Levin

Respectfully, Penny Levin Wailuku, Maui TMK (2) 3-6-004:007 Pohakulepo LLC – Hawaiian Cement quarry Exhibit A: "Boulder field" feature and Pohakea stream and tributaries



