

Why an Industrial Dairy at Maha'ulepu Will Cause Irreparable Harm

1. HDF's six-inch thick Draft EIS finally acknowledged that all drainage from HDF's site will flow directly onto sands of Maha'ulepu Beach before entering the Pacific Ocean:
 - The proposed HDF dairy site is covered with a necessary and extensive ditch network that drains more than 80% of the total acreage (578 acres), clay soil (see attached soil analysis and KSAT information that reports 52.9 % of the farm soils are saturated between 0.0 and 0.2 inches and another 30.5% with 0.2 - 0.6 inches). Before ditches were dug, HDF's site was covered by a swamp. See 1890 map from Kauai Historic Society. Unfortunately, the clay soil has a low permeability with a high risk for drainage/runoff. HDF cleared the vegetation and restored the extensive ditch network overgrown after the sugar plantation closed in 1996.
 - Following the Court Ordered site visit of March 2016, HDF acknowledged that their extensive ditch network drains their site of rainfall, irrigation and runoff from adjacent properties. With the filing of their Draft EIS, 6/8/16, HDF admitted that their ditches are ultimately drained by the Waiopili Ditch which becomes the Waiopili Stream and then flows across the beach at Maha'ulepu before draining into the ocean:

"Spread across the pastures on the valley floor are numerous straight agricultural ditches that serve the purpose of draining runoff from various pasture areas." DEIS Volume 2, Biological Surveys, page 19.

"Surface waters draining the project site meet Waiopili Ditch, and will eventually reach the ocean." DEIS Volume 2, Surface Water and Marine Assessment, page 2.

"Hydrologic Assessment for the Pasture Areas, Hawai'i Dairy Farms May 9, 2016
Runoff from the east side of the valley, similarly, sheet flows or is conveyed via shallow concentrated flow through the various system of ridges and valleys along the east side of Māhā'ulepū Valley. Runoff concentrates into several ditches, cut from agricultural operations, before ultimately collecting into one of the major ditches that runs mauka to makai along the central or east side of the farm. This ditch conveys both water collected from the various tributary ditches, but also sheet flow from the central and eastern areas of the farm, to the makai boundary of the farm along Māhā'ulepū Road, before leaving the site and ultimate discharge into the ocean. The flows from these two ditches converge beyond the boundary of Hawai'i Dairy Farms before discharge to the ocean." DEIS Volume 2 pg. 709 of 732
2. In a recent publication, HDF disclosed to the public that "the farm will retain nearly 98 percent of these nutrients in the pasture." See TGI Forum 7/24/2016 http://thegardenisland.com/news/opinion/guest/dairy-s-pasture-based-model-protects-environment/article_2b8400d1-b7b5-5bab-b928-c9ade82321b4.html Also see DEIS, Volume 1, page 4-13, pdf page 105 of 299. 2% of 2 million pounds of wet manure monthly is a significant discharge.
3. HDF's claim of capping runoff at 2% is unsupported. HDF's June 1, 2016 revised Waste Management Plan reports each mature dairy cow will eliminate at least 90 lbs. of wet manure daily. 699 mature dairy cows plus calves and bulls, will, per HDF, now result in at least 2 million pounds of wet manure produced monthly. A 2% loss of that waste will result in 40,000 lbs. of waste runoff per month through the many ditches and stream that ultimately empties across Maha'ulepu Beach and into the Pacific Ocean. 20 tons of runoff monthly is not only untenable but in clear violation of the [Beach Act](#) and [Clean Water Act](#).
4. The Waiopili Stream that drains HDF's site into the ocean has been and remains [alarmingly contaminated](#). See [EPA letter 7/26/2016](#). DOH, USGS and Surfrider studies over the last 2.5 years confirm Maha'ulepu Beach, a popular recreation area, is already problematic. To date, the source of the consistent and chronic contaminations remains unknown.
5. HDF's Draft EIS fails to address the increase in bacteria, nitrate and other chemical pollutants certain to be carried across the beach and into the ocean via their ditch network. Because of its low saturation point, high water table, extensive ditch network, it is truly probable that much more than 2%/20 tons of waste will be lost each month from HDF's operation.

6. HDF fails to address the human health risk from aerosolized manure particulate matter and biting flies that will be carried by the well-known prevailing trade winds that blow across the Maha'ulepu site to Koloa and the adjacent coastal resorts and residences. "Wind velocity measurements reported in the HDF DEIS to average 10 miles per hour lack relevance." Charles Blay, PhD. DEIS Comment filed 7/25/16, because, as Dr. Blay points out, there are many days when the trade winds blow 15 - 20 - 25 mph, a fact not addressed or acknowledged by HDF. Those winds will surely carry noxious odors and biting flies, risking the health of nearby visitors and residents.
7. County Wells C, D, & F that supply water to the communities of Poipu and Koloa are unconfined wells that are recharged by the large Koloa aquifer, over which HDF plans to graze its herd. With a plan for 100% land application of all waste, the nitrate and bacterial contamination of our wells is certain. It is staggering that DOH accepted HDF's contention that their waste would be "more than 1/2 mile" from the nearest Koloa well. Kauai County Water Department records show two of their main wells are within 750 feet from the proposed untreated waste dump site. Nearly 20% of the farm site has soils that will percolate well, carrying bacteria laden waste and nitrates directly to ground water and the aquifer that recharges the Poipu and Koloa wells. Over 80% of the site, with clay soils, while poorly permeable, will also absorb nitrates because nitrates tend to bind and be absorbed by the clay surface, increasing the nitrate infiltration into the aquifer and the Koloa wells. Once contaminated by unsafe nitrate levels, these irreplaceable wells will be abandoned and our drinking water will have to be imported.
8. HDF summarily concluded there would be no adverse economic impact to the South Shore of Kauai. HDF's total disregard and failure to address adverse impacts from trade wind born particulate matter, noxious odors and biting flies, conveniently supported their blind eye to the impact to the tax base with property devaluation and drop in tourism which will affect both the State and the County. Currently, 25% of the Kauai islands property tax revenue is generated from South Shore (Koloa and Poipu) properties.
9. HDF has abandoned the "New Zealand Model" which they claimed their plan would emulate from January 2014 through June 2016. In truth, there is no such thing as a "New Zealand Model". New Zealand's concentrated dairy operations have cost New Zealand nearly 60% of their potable water, per The Report of the Independent Parliamentary Commissioner for the Environment, 2015.
10. Group 70 International is an architectural firm specializing in resort and large residential developments. Neither Group 70 nor HDF have ever designed or operated a dairy. The Cornell Dairy Model and Island Dairy Model, HDF now claims to be following remain elusive. Equally concerning is that Group 70, the company credited with creating HDF's proposed Dairy and Waste Management Plan, is also the company conducting HDF's EIS. The following unsupported statement appears, word for word *seven times* in the Draft EIS. Could it be that the following hype is offered to distract the reader from the lack of sound science to support their Plan?

"The farm will be based on the most successful island dairy models in the world, and will utilize a sustainable, pasture-based rotational-grazing system and 21st century technology." HDF DEIS Vol 2. Page 3 (pdf pg 9 of 732); page 1 (pdf pg 121 of 732); page 1 (pdf pg 277 of 732); page 8 (pdf pg 318 of 732); page 11 (pdf pg 493 of 732); page 1 (pdf pg 693 of 732); and page 17 (pdf pg 709 of 732)

The above doesn't take into consideration many of HDF's misrepresentations, such as claiming to have a "NRCS Permit - completed" when no such permit exists. NRCS does not issue permits in Hawaii.