DAVID Y. IGE
Governor

SHAN S. TSUTSUI
Lt. Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

PHYLLIS SHIMABUKURO-GEISER
Deputy to the Chairperson

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

January 29, 2015

Mr. Daniel Orodenker
Executive Officer
Land Use Commission
235 South Beretania Street, Suite 406
Honolulu, Hawaii 96813

Dear Mr. Orodenker:

Subject: Docket No. DR14-52
Petition for Declaratory Order to Designate Important Agricultural Lands in Kawailoa and Punaluu, Oahu
Tax Map Keys: Kawailoa (9,171.161 acres): 6-1-05: 1(Por.); 6-1-06: 1(Por.); 6-1-07: 1; 6-2-09: 1(Por.); 6-2-10: 1(Por.); 6-2-11: 1(Por.); 6-2-11: 21. Punaluu (420.887 acres): 5-3-01: 41 (Por.); 5-3-03: 1 (Por.); 5-3-04: 5; 5-3-04: 7; 5-3-04- 13; 5-3-04: 18(Por.); 5-3-04: 19; 5-3-07: 23(Por.)
Total Area: 9,592.048 acres

Thank you for the opportunity to comment on this important petition. The Department of Agriculture (DOA) expresses its appreciation to the petitioner for their interest in and effort to identify potential Important Agricultural Lands (IAL). We note that the petitioner is not seeking a reclassification of land pursuant to Section 205-45(b), Hawaii Revised Statutes (HRS) in conjunction with this petition to designate IAL. The petitioner is also voluntarily waiving all rights to claim any credits due pursuant to Section 205-45(h), HRS (Petition, page 23). This is the third IAL petition involving agricultural lands on the island of Oahu and the ninth IAL petition statewide.

In the following, we provide responses to the petitioner's statements as to how the petitioned area meets the eight criteria for identifying IAL (Section 205-44, HRS).

Land Currently Used for Agricultural Production

Past agricultural production
According to the Agricultural Land Assessment (ALA) found in Appendix G of the petition, the lands of Kawailoa were used for taro and other various agricultural crops in the 1800's. (ALA, p. 2). Starting in the mid-1800's, sugar cultivation was the primary agricultural crop that was being cultivated by Castle and Cooke and later managed by Waialua Sugar Company. Upon further review by Department staff, sugarcane appears to have been planted throughout Kawailoa with the exception of the middle section where pineapple also appeared to be cultivated.

Punaluu was also used for taro and other various agricultural crops in the 1800's. (ALA, p. 3). Sugar cultivation was the primary agricultural crop in early 1900's to 1970. Upon further review by Department staff, sugarcane appears to have been planted throughout Punaluu. Taro and pineapple were also produced in smaller quantities. (ALA, p. 3).

Current Agricultural Production
According to the petition, only around 11% of the land in Kawailoa is currently in agricultural production. Approximately 722 acres (7.8%) of land is utilized for diversified agriculture and include seed corn, banana, taro, papaya, mango, and hydroponic lettuce. (ALA, p. 4). The location of current diversified agricultural production appears to be on the lower half of Kawailoa (ALA, Figure 1A). Other agricultural uses include approximately 60-80 head of cattle on 297 acres (3%), and 0.7 acres of koa windbreak (Petition, Exhibit H). The livestock use appears to be in the middle of the Kawailoa area abutting Anahulu Valley (ALA, Figure 1A). All current agricultural uses appear to be on lands that are near existing irrigation infrastructure (ALA, Figure 6A). Approximately 30 wind turbines for electrical generation occupy a portion of the property above 600 feet elevation (Petition, Exhibit H).

According to the petition, around 36% of the land in Punaluu is currently in agricultural production (ALA, p. 5). Approximately 120 acres (29%) of land is utilized for diversified agriculture and include banana, papaya, mango, cucumber, mixed vegetable, taro, and cacao. There also exists approximately 22 acres (5%) of livestock, 11 acres (3%) of aquaculture, and several nurseries. Additional research by Department staff determined that the location of the existing agricultural uses indicated in ALA Figure 1B is generally consistent with the location of past sugarcane cultivation on the land.

Future agricultural production
For Kawailoa, diversified agriculture will remain the primary focus. (ALA, p. 4). The mauka unirrigated lands are designated for multiple uses consisting of livestock, orchard, forestry and renewable energy (Petition, p. 9). These planned future uses appear to be in consonance with the Moku O Waialua North Shore Plan (Exhibit C, p. 2).

Petitioner plans to increase renewable energy development by increasing the amount of wind turbines on the land, and is considering a 50MW facility on 500 acres of land which includes sheep grazing. (ALA, p. 4). The DOA notes that according to the Moku O Waialua North Shore Plan, alternative energy development is designated to be located in the eastern region of Kawailoa (Exhibit C, p. 2). Petitioner also plans to increase the availability of lands to farmers and provide long term leases (ALA, p. 4).

For Punaluu, diversified agriculture will remain the primary focus (see ALA, Figure 2B). The petitioner's "Punaluu Ahupuaa Plan" (Petition, Exhibit D) states that 175 acres of agricultural use will be added to what we presume to be the existing 133 acres of diversified agriculture, livestock, and aquaculture. This will bring the total area in agriculture to 308 acres, or 73 percent of the petitioned area. Petitioner also plans renovate the agricultural water system in the area, develop an overall agriculture production and land conservation plan, establish longer term leases with tenants, and construct a central agricultural baseyard facility (ALA, p. 5). These planned future uses appear to be in consonance with the Punaluu Ahupuaa Plan (Petition, Exhibit D).

Land with soil qualities and growing conditions that support agricultural production of food, fiber, or fuel- and energy-producing crops

According to the Land Study Bureau's Detailed Land Classification (LSB) for the Island of Oahu, 3,034.663 acres (33.3%) in Kawailoa is rated "A", 1,632.211 acres (17.8%) is rated "B", 1,134.423 acres (12.4%) is rated "C", 241.536 acres (2.6%) is rated "D", and 3,054.79 acres (33.3%) is rated "E" (see ALA, Figure 3A). Additional research by Department staff indicates that the majority of "C", "D", and "E" rated lands in Kawailoa would not improve in rating if irrigation was available. Soil rockiness and/or unfavorable slope severely limits agricultural use of these lands.

According to the LSB, 39.44 acres (9.4%) in Punaluu is rated "B", 146.313 acres (34.7%) is rated "C", 51.859 acres (12.3%) is rated "D", and 183.257 acres (43.5%) is rated "E" (see ALA, Figure 3B). Additional research by Department staff indicates that the majority of "D" and "E" rated lands in Punaluu would not improve if irrigation was available. The majority of "C" rated lands in Punaluu is already irrigated.

Lands identified under agricultural productivity ratings systems, such as the Agricultural Lands of Importance to the State of Hawaii (ALISH) system adopted by the Board of Agriculture on January 28, 1977

According to the Agricultural Lands of Importance to the State of Hawaii (ALISH) classification system, the Kawailoa site is comprised of 5,852.319 acres (63.8%) in "Prime", 198.572 acres (2.2%) is in "Other Important", and 3,120.27 acres (34%) is not classified according to ALISH (see ALA, Figure 5A). The lands in Kawailoa that are not in ALISH are generally consistent with the lands designated as "E" by the LSB.

For the Punaluu site, 25.243 acres (6%) is in "Prime", 262.547 acres (62.4%) is in "Other Important", and 133.097 (31.6%) is not classified according to ALISH (see ALA, Figure 5B). Some of lands in Punaluu that are not in ALISH are not consistent with the lands designated as "E" by the LSB.

Land types associated with traditional native Hawaiian agricultural uses, such as taro cultivation, or unique agricultural crops and uses, such as coffee, vineyards, aquaculture, and energy production

The Kawailoa and Punaluu areas have been historically associated with traditional native Hawaiian agricultural uses. In Kawailoa, archaeological surveys indicate that traditional native Hawaiian agricultural uses were limited to the lower lands and gulches, while the upper table lands did not exhibit any traditional sites (Petition, p. 14). Historic native Hawaiian uses included taro pond fields, water courses/ditches, and dry planting fields for cultivation of taro, awa, hala, ipu, kukui, koa, banana, sugarcane, sweet potato, and wauke (Petition, p. 14).

In Punaluu, archaeological surveys and cultural impact assessments indicated that traditional native Hawaiian uses were prevalent in (Petition, p. 15). Historic native Hawaiian uses include taro pond fields, water courses/ditches, and dry planting fields for cultivation of taro, awa, hala, ipu, kukui, koa, banana, noni, olona, sweet potato, and wauke (Petition, p. 15). Approximately 11 acres (Petition, Exhibit I) is currently being used to cultivate taro, and approximately 11 acres is in aquaculture (ALA, p. 5).

Lands with sufficient quantities of water to support viable agricultural production

Along with good quality soil, a reliable and sufficient supply of irrigation water is critical for maximal agricultural production. Irrigation water should be available in a quantity that meets the maximum daily demand over a sustained period of time which usually occurs during the summer months. Information on the location and total acreage of irrigated lands, the existing and estimated future irrigation water demands, and the available amount of water for irrigation per day is necessary to determine whether or not lands have sufficient quantities of water to support viable agricultural production.

The existing irrigation system services all of the southern portion (Opae'ula) of the Kawailoa area, but only services approximately 2/5ths of the makai half of the northern portion (Kawailoa). The irrigation system in Kawailoa connects Waimea River, Ka'alaea Stream, Kawailoa Stream, Laniakea Stream, and Anahulu River with ditches, pipelines and reservoirs (see ALA, Figure 6A). Petitioner plans to maintain and fix aging irrigation infrastructure and has recently expended over $13 million to improve agricultural water resources for current and planned future irrigation needs (ALA, p. 7). Kawailoa receives between 35 to 80 inches of rain per year (see ALA, Figure 6A).

The petition states that the proposed IAL lands in Punaluu are primarily irrigated by the Punaluu Stream and ditches that are connected to the stream. Petitioner has upgraded the existing water system by piping over 5,000 linear feet of the former Punaluu irrigation ditch (ALA, p. 8). Petitioner states that from 2009 to 2014, approximately $1.5 million has been invested in upgrading the irrigation system in Punaluu, and plans to invest another $5 million for stream restoration work (ALA, p. 8). Punaluu receives between 65 to 120 inches of rain per year.

The DOA notes that for both the Kawailoa and Punaluu areas, the petitioner may need to petition the Commission on Water Resource Management to amend the interim instream flow standard for any new or expanded diversions of surface water.

Land whose designation as Important Agricultural Lands is consistent with general, development, and community plans of the County

The petition area is fully within the State Agricultural District. The Kawailoa area is zoned as AG-1 (Restricted Agriculture) by the City and County of Honolulu, and the Punaluu area is zoned as AG-2 (General Agriculture). The Kawailoa area is primarily designated as Agricultural in the North Shore Sustainable Communities Plan, except for the streams and fringes of the streams which are designated as Preservation. The Punaluu area is largely designated as "Agricultural" in the Koolau Loa Sustainable Communities Plan, except for the streams and fringes of streams which is in Preservation. The Punaluu lands appears to abut the Urban District on the makai edges of the petition area.

Land that contributes to maintaining a critical land mass important to agricultural operating productivity

The Kawailoa/Opaeula area (9,171.161 acres) has a history of sugarcane and pineapple cultivation on the lands that were level enough to support agricultural activity. The lower two-fifths of Kawailoa contains nearly all the "A" and "B" rated land and is relatively unbroken by gulches. Similarly, the makai two-thirds of Opaeula possesses all the "A" and "B" rated lands and is relatively unbroken by gulches. The upper reaches of both Kawailoa and Opaeula appear to have more land area in gulches which makes it difficult for agricultural use in both areas above the ditch system. Further, the Kawailoa area is entirely separated from the Opaeula area by Opaeula Gulch. We note what appears to be a large number of kuleana properties within the Gulch. With the exception of Drum Road on the mauka edge of both areas, there are no roadways connecting Kawailoa and Opaeula.

The petitioner's "North Shore Plan – Paalaa to Kapaeloa" states that the upper reaches of Kawailoa and Opaeula are to be used for "Establish alternative energy uses" such as solar energy, wind, and hydro-power (Petition, Exhibit C), and leaves the lower lands for diversified agriculture. There are 30 wind turbine operating in upper Kawailoa, on

plateaus between the gulches. Given the agricultural history and the land use plan for Kawailoa/Opaeula, the "critical land mass" criterion would clearly apply to the lower elevations where the petitioner identifies "Diversified Agriculture" as the primary use of the land (Petition, Exhibit C).

The Punaluu area (420.887 acres) appears to have been the eastern terminus of the former Kahuku Plantation Company. Unlike the Kawailoa/Opaeula site, Punaluu has a substantial acreage classified as Preservation along the branches of the Punaluu Stream, according to the Koolauloa Sustainable Communities Plan (Petition, Exhibit G, Figure 7B). The property also abuts the Urban District along the makai edge (Petition, Exhibit G, Figure 8B). The current agricultural operations (Petition, Exhibit G, Figure 1B) is largely verified by recent satellite imagery. There appears to be agricultural activity in lands adjacent and to the northwest of the Punaluu site. There is a relatively steep area along the southern boundary that forms an arc.

The petitioner's "Punaluu Ahupuaa Plan" (Petition, Exhibit D) states that 175 acres of agricultural use will be added to what we presume to be the existing 133 acres of diversified agriculture, livestock, and aquaculture. This will bring the total area in agriculture to 308 acres, or 73 percent of the petitioned area. The Punaluu stream is fundamental to the agricultural activities in the area and is appropriate to be included in the petition. Given the agricultural history and the agricultural land use plan for the Punaluu site, the "critical land mass" criterion would to most of the petitioned area.

Land with or near support infrastructure conducive to agricultural productivity, such as transportation to markets, water, or power

Kawailoa is near Kamehameha Highway and Haleiwa Village. In the future, petitioner plans to increase the residential and commercial areas in Haleiwa Village. (Petition, Exhibit C). The service area for the existing irrigation system in the northern Kawailoa area (Kawailoa) appears to be limited to approximately 2/5ths of the makai half of the proposed designation.

CONCLUSION

The DOA supports the majority of the petitioner's request to have 9,592 acres of agricultural land in the Kawailoa/Opaeula and Punaluu areas designated as Important Agricultural Land.

In the Kawailoa/Opaeula site, the petitioner's plan for the eastern part of the property is to undertake alternative energy uses such as wind, hydro, and solar energy. Specifically, the petitioner states that 500 acres will be set aside for a 50MW solar energy facility with compatible sheep grazing. This area is also the most poorly suited to agricultural use because of the numerous gulches, poorer soil quality, and lack of

supplemental irrigation water supply. Further, we do not recall any other request for IAL designation that included acreage for a utility-scale solar energy facility.

Notwithstanding our concerns, if the petitioner confirms and commits to using a substantial portion of the energy generated by the proposed solar energy facility directly for agricultural purposes, and/or confirms and commits to using a substantial portion of the income derived from the selling of electricity to the utility for agricultural activities within the petitioned area, the Department would support IAL designation for the area proposed for the solar energy facility as described in the petition (Exhibit C, "Plan Map and Projects").

Also for the Kawailoa/Opaeula site, the petitioner should provide the Commission with information showing that the irrigation water system and improvements will provide a quantity of irrigation water sufficient to maintain plant and animal health during dry periods.

In the Punaluu site, there appears to be abundant irrigation water supply, fairly productive soils, and 120 acres of existing diversified agricultural activities. We note from Exhibit I of the petition that there is existing agricultural activity on some of the LSB "E" rated land that is also not classified by the Agricultural Lands of Importance to the State of Hawaii. There appears to be agricultural land to the north of the petitioned area that are in crop production. The Department believes that the Punaluu site, in its entirety, should be designated as IAL.

Sincerely,

Scott E. Enright, Chairperson
Board of Agriculture

c: Office of Planning