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August 5, 2016

Mr. Daniel Orodener
Executive Officer
Land Use Commission
235 South Beretania St.
Suite 406
Honolulu, HI 96813

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LAND USE COMMISSION
STATE OF HAWAII

Dear Mr. Orodener:

Subject: Petition for Declaratory Order to Designate Important Agricultural Lands
Docket No. DR16-56
Robinson Family Partners
20,888 acres in Makaweli, Kauai

Thank you for this opportunity to comment on this important petition. The Department of Agriculture 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 (Petition, p. 13). The petitioner is also voluntarily waiving all rights to claim any credits pursuant to Section 205-45(h), HRS (Petition, p. 13). This is the fifth IAL petition involving agricultural lands on the island of Kauai and the ninth IAL petition statewide.

The Department offers its support for the majority of the petitioner's request for IAL designation, but has strong reservations about designating as IAL the northernmost portion of the petition area (approximately 3,260 acres, hereinafter referred to as the "northernmost portion", see attached "Northernmost Portion Area" map).

In the following, we have responded to the petitioner's statements as to how the petitioned lands meet the eight criteria used for identifying potential IAL (Section 205-44, HRS).



1. Land currently used for agricultural production.

According to the petition, the entire 20,888 acres sought for IAL designation is currently in agricultural production (Petition, p. 5). Approximately 18,700 acres of land in the petition area (ranching area) is leased to Gay & Robinson who operates a cattle ranch under the tradename Makaweli Ranch. The Ranch has an additional 6,300 acres immediately adjacent to but outside the petition area, for a total of 25,000 acres, and the remaining 2,188 acres is leased to Agrigenetics Inc. and Dupont Pioneer for seed production (Petition, p. 5). The seed production areas are located in the petition area closest to Kaumualii Highway.

According to the petition, a total of 15,000 acres of the ranching area is fenced. (Petition, Exhibit A, p. 5). Pig fencing is used to keep out wild pigs, while cattle fencing is used to create fenced paddocks for housing cattle and managing grass growth and maintenance. According to PBR Hawaii (email, dated July 27, 2016), the petitioner works with the United States Department of Agriculture's National Resource Conservation Service (NRCS) for conservation planning within the petition area.

The petition states that Makaweli Ranch has 3,500-4,000 head of cattle (Petition, p. 5). Makaweli Ranch is a 25,000-acre ranch that includes the petition's 18,700-acre ranching area. According to the petition, at any given time, around 50 percent (1,750-2000 head) of the cattle at Makaweli Ranch is located within the petition area (Petition, Exhibit A, p. 4). The ranching area is comprised of "Upper Pasture" (approximately 11,940 acres) and "Lower Pasture" (approximately 6,760 acres) areas which are separated by the Olokele Ditch System that runs roughly parallel to Kaumualii Highway across the petition area. **Upper Pasture area (11,940 acres)**

The Upper Pasture area is primarily "managed to control invasive species and improve the grasses that are sustained by rainfall." (Petition, Exhibit A, p. 4). Department staff confirmed with PBR Hawaii (email, dated July 27, 2016) that the petitioner does not work with NRCS to control invasive species in the petition area. The NRCS offers conservation programs that provide assistance to control invasive species.

According to PBR Hawaii (email, dated July 26, 2016), the Upper Pasture area is also utilized throughout the year for grazing and contains some fencing. The fencing within the Upper Pasture area generally runs linearly in sections from the Olokele Ditch line to the mauka boundary of the petition area. PBR Hawaii states (email, dated July 21, 2016) that the natural topography also serves as barriers for cattle in the Upper Pasture area. PBR Hawaii estimates (email, dated July 26, 2016) that the Upper Pasture area supports "approximately 50% of the existing herd within the proposed IAL." Therefore, 875 to 1,000 head

of cattle occupy the Upper Pasture. The petition states that the approximate carrying capacity for the ranch lands is 1 head of cattle per 5 acres of land (Petition, Exhibit A, p. 4).

Department staff researched pasture use of the three predominant soil types found in the Upper Pasture area. We could not substantiate the carrying capacity claim of 1 head per five acres based on different sources of information (see response to criterion 2 on pages 2-3). There is no discussion on the availability of drinking water for cattle in this area.

Lower Pasture area (6,760 acres)

The Lower Pasture area is "more intensely utilized by the cattle herd." (Petition, Exhibit A, p. 4). Within the Lower Pasture area, 400 acres are irrigated pasture and the petitioner has also implemented a seed propagation and grass planting program on approximately 2,800 acres. The seed propagation and grass planting program removes invasive species and plants preferred species of pasture grass, such as green panic grass and other high protein quantity grasses (Petition, Exhibit A, p. 5). The petition states that the approximate carrying capacity for the Lower Pasture area is 1 head of cattle per 5 acres of land (Petition, Exhibit A, p. 4). There is fencing throughout most of the Lower Pasture area (Petition, Exhibit A, Figure 2b).

Past Agricultural Production

Past agriculture production on the petition area included sugarcane cultivation and cattle ranching. From 1884 to 2009, sugarcane was cultivated on a portion of the Lower Pasture lands by the Hawaiian Sugar Company (1889-1941), Olokele Sugar Company (1941-1994), and Gay and Robinson (1994-2009). The Upper Pasture lands have been managed by the Robinson family and used for cattle ranching since 1865.

Future Agricultural Production

Within five years, the Petitioner plans to increase the herd capacity of the Lower Pasture area by 1,500 head, supported by the addition of 1,000 acres of irrigated pasture. The petitioner will also add 500 acres to its seed propagation and grass planting program (Petition, p. 11).

Northernmost Area Analysis

The Department notes that the petitioner does not have any plans to establish improved pasture within any Upper Pasture lands. A line of fencing extends along the north-western border of the petition area and within the northernmost portion; however, it is not clear whether this fence is to keep cattle out or in.

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

The petition identifies the distribution of soil by their overall productivity potential on the petition area according to the "Detailed Land Classification – Island of Kauai" otherwise known as the Land Study Bureau (LSB). The distribution is as follows - 7% "A", 7% "B", 3% "C", 6% "D", and 77% "E" (Petition, 6). To our knowledge, this petition area contains the highest percentage amount of "E" rated soils of prior IAL petitions that were not withdrawn.

The overall productivity ratings are an average of the LSB's crop-specific Productivity Classes of which grazing is one category. A review of the LSB Productivity Classes for the Upper Ranching area indicates mostly mediocre carrying capacity for cattle pasture, estimating a sustainable capacity range of 2.5 acres to 30 acres per head with estimated live beef gains of 9 to 110 pounds per acre per year (LSB, p. 20). The majority of the Upper Pasture lands is rated "E". There is no improvement to productivity of the "E" rated lands by the addition of irrigation.

Much of the Upper Pasture area has slopes greater than 20 percent (see attached Slope Map). The northernmost portion of the petition area contains slopes in excess of 60 percent. The Lower Pasture area contains slopes-ranging from 0 to 20 percent.

A cursory review of NRCS soils in the northernmost portion shows that the predominant soil types are Rock Outcrop, Rough Broken, or Rough Mountainous. These soil types are generally unsuitable for farming, and are primarily used for watersheds, wildlife habitat, and recreation. (NRCS Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai (1972), p.119). The Rock outcrop soil type has slopes from 5-99%, Rough Broken soil type has slopes from 40-70%, and Rough mountainous soil type has slopes of 50-99 percent. (NRCS Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai (1972), p.119).

Department staff reviewed the information presented in the 2015 Statewide Agricultural Land Use Baseline Study (Baseline study). The Baseline study was commissioned by the Department and prepared by the University of Hawaii at Hilo, Spatial Data Analysis & Visualization Research Lab. Data used to create the crop summary maps came from satellite imagery, verified by ground-truthing, meetings with agricultural stakeholders and landowners, county real property tax assessment and agricultural water use (page 96). Pasture lands "...includes areas in active commercial cattle operation where fencing is apparent and water troughs and/or cattle trails can be identified. Rangelands that are fenced and grazed only seasonally are mapped as pastureland." (page 98) According to the Baseline study's map of Kauai (Kauai Crop Summary, page 49),

there was indication of pasture use within the eastern side of the Upper Pasture area; however, no pasture use was indicated in the northernmost portion of the petition area (see attached Kauai map). The information presented in the Baseline study is not intended for any regulatory use, therefore we present this information in that spirit (page 95).

3. 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.

About 13% of the petition area is classified "Prime" agricultural land according to the ALISH system, 14% is classified as "Other Important" agricultural land, and less than 0.1% is classified as "Unique" agricultural land. (Petition, Exhibit A, Figure 6). The remaining 73% percent of the petition area, including the majority of the entire upper pasture area, is not classified according to the ALISH system (Petition, p. 7; Exhibit A, Figure 6). The aforementioned LSB "E" rated areas described in criterion 2 within the Upper Pasture area, closely matches the footprint of the area not classified by ALISH - this suggests that these areas have very limited agricultural production potential.

4. 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 petition states that the petition area is a historic and operationally important contributor to the production of beef on Kauai, and is therefore a unique agricultural resource for the State of Hawaii (Petition, p. 8). The Department appreciates and respects the long history and importance of the ranching operation in the area, however the definition of unique in this criterion is not meant to capture these values. The Department notes that none of the Upper Pasture lands are classified as "Unique" under the ALISH system. The ALISH system classifies "Unique" lands as having qualities favoring production of a specific high-value food crop such as (Kona) coffee, taro, rice, and watercress. (Agricultural Lands of Importance to the State of Hawaii, State Department of Agriculture (1977)). The petition does not provide information on current or historic traditional native Hawaiian agriculture uses within the petition area.

5. Lands with sufficient quantities of water to support viable agricultural production.

According to the petition, the petition area is primarily irrigated by two ditch systems, the Koula Ditch and the Olokele Ditch (Petition, p. 8). The Koula Ditch System is approximately 13.5 miles long, starting at the base of Manawaiopuna Falls, flowing northeast to southwest, and ends at Field 32 Reservoir. The water capacity of the Koula Ditch System is approximately 55 million gallons per day (MGD) (Petition, p. 8). The water capacity of the Olokele Ditch System is approximately 70 MGD (Petition, p. 8) and flows eastward across the petition area. The petition area also contains 10 reservoirs with a total capacity of 275

million gallons (Petition, p. 8). The petition does not indicate whether the reservoirs are connected to the two ditches. The petition area also receives an average of 25 to 30 inches of rain annually in the Lower Pasture area, and 50 to 80 inches of rain annually in the Upper Pasture area (Petition, Exhibit A, Figure 5). Currently, 400 acres of pasture in the Lower Pasture area is irrigated, and the petitioner plans to irrigate an additional 1,000 acres in the Lower Pasture area within the next 5 years. The Olokele Ditch and the Koula Ditch was operated and maintained by the Gay and Robinson Plantation. (Agricultural Water Use and Development Plan (Revised 2004), p. 25).

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

The petition area is entirely within the State Agricultural District. The 2000 Kauai General Plan, West Side Planning District Land Use Map (Petition, Appendix A, Figure 7a) designates the petition area as primarily in the "Open" classification, with some lands closer to Kaumualii Highway in the "Agriculture" classification. The "Open" classification typically includes "important landforms, wetlands, streams, steep slopes, and other environmentally-sensitive areas" and does not include agricultural uses within this classification (Kauai General Plan - 2000, Chapter 5, p. 5-5).

Pursuant to Section 205-47, HRS, the County of Kauai Planning Department initiated a study on IAL and has provided a final study, titled, "County of Kauai Important Agricultural Lands Study," dated August 2015. The study indicates that a threshold score of 28 or above (on a scale of 0 to 40), meets all eight (8) of the IAL criteria under 205-44, HRS, at some level, and the Study recommends that these lands be given priority in Kauai County's IAL designation (County of Kauai Important Agricultural Lands Study, p. 3). The majority of the Upper Pasture area scored 15 points or below in the County IAL study, and all of the northernmost portion area scored 15 points or below (Petition, Exhibit A, Figure 9).

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

The petition states that approximately 50 percent of Makaweli Ranch's 3,500-4,000 cattle herd are located on the petition area at any given time (1,750-2,000 head) (Petition, Exhibit A, p. 4). According to the United States Department of Agriculture's 2012 Agricultural Census, a cattle population of 1,750 to 2,000 represents about 14 percent of the total cattle population on Kauai.

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

As stated under IAL criterion 5, the petition area has 10 reservoirs with the total capacity of 275 MGD; however, it does not discuss the role the reservoirs have in providing irrigation water to lands within the petition area or elsewhere. The petition discusses the history behind the Koula and Olokele Ditch Systems; however, it does not clearly explain the role the Ditch systems have in providing irrigation water to the Lower Pasture area or seed corn operations located within the petition area.

According to PBR Hawaii, the Makaweli Meat Corporation (MMC) slaughterhouse is near but outside the petition area, located makai of Kaunualii Highway, adjacent to the old Gay & Robinson Sugar Mill (PBR Hawaii email, dated July 8, 2016). The MMC slaughterhouse currently processes 9 head of cattle per week from the Makaweli Ranch (Petition, Exhibit A, p. 6). Within the next year, Makaweli Ranch anticipates increasing to 12 the number of head of cattle to be processed at the MMC slaughterhouse (Petition, Exhibit A, p. 6). The Department recognizes the slaughterhouse as a significant asset to the Ranch.

There exists a 1.25 megawatt hydroelectric plant that is within but excluded from the petition area (see the "Not IAL" area in Petition, Figure 2A, Exhibit A). The hydroelectric power plant uses water diverted from the Olokele River and provides power to irrigation pumps in the Lower Pasture area and the MMC slaughterhouse (PBR Hawaii, email dated July 8, 2016). Again, the Department recognizes the hydroelectric power plant as a significant asset to the Ranch and supports the agricultural use of the area.

Comments and Recommendations:

The Department offers its full support for the petitioner's request for IAL designation of the 6,760 acres in the Lower Pasture area and the 2,188 acres in seed production (see Petition, Exhibit A, Figure 2b). These areas possess characteristics that meet the majority of the 8 IAL identification criteria. The petitioner's slaughterhouse and hydropower plant are very important assets that are not part of the request for IAL designation, but substantially strengthens the request for IAL designation.

The Department also offers its support for IAL designation for the majority of the Upper Pasture area. While most of the Upper Pasture lands have slopes of 20 percent or greater, the petitioner has indicated that approximately half of the cattle within the petition area is in the Upper Pasture area, although we were unable to confirm the petitioner's assertions. Further, there are fence lines running perpendicular from the Olokele Ditch line to the mauka boundary of the petition area.

Finally, the Department has strong reservations about designating the northernmost portion of the Upper Pasture area as IAL. This area encompasses about 3,260 acres. The petition does not provide convincing evidence of agricultural use within the area. The northernmost portion contains lands predominantly rated "E", indicating

very poor productivity potential by the LSB and not classified according to the ALISH system. The NRCS Soil Survey identifies the soils in this area as unsuitable for farming and primarily used for watersheds, wildlife habitat, recreation, but not pasture. Furthermore, the topography within the northernmost portion appear to be the most extreme in the entire petition area. This feature severely limits its utility for agricultural use. The effect of the physical limitations that exist in this area appears to be supported by the 2015 Statewide Agricultural Land Use Baseline study, which does not identify pasture use in this area.

Sincerely,

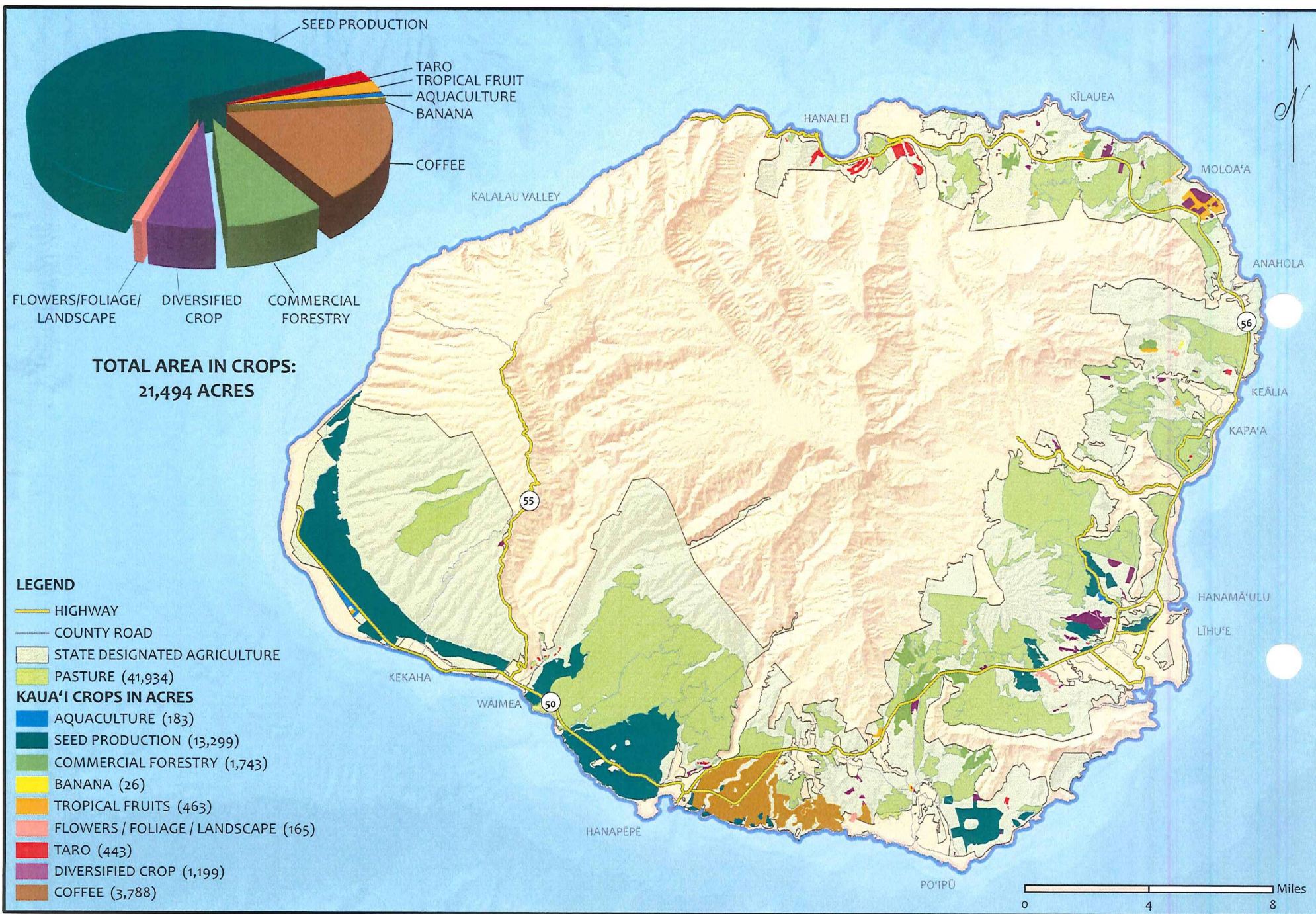
A handwritten signature in black ink, appearing to read "Scott E. Enright", written over a horizontal line.

Scott E. Enright, Chairperson
Board of Agriculture

Attachments (3):

Northernmost Portion Area Map
Slope Map
Kauai map for the Baseline study

c: Office of Planning
Kauai County Planning Department

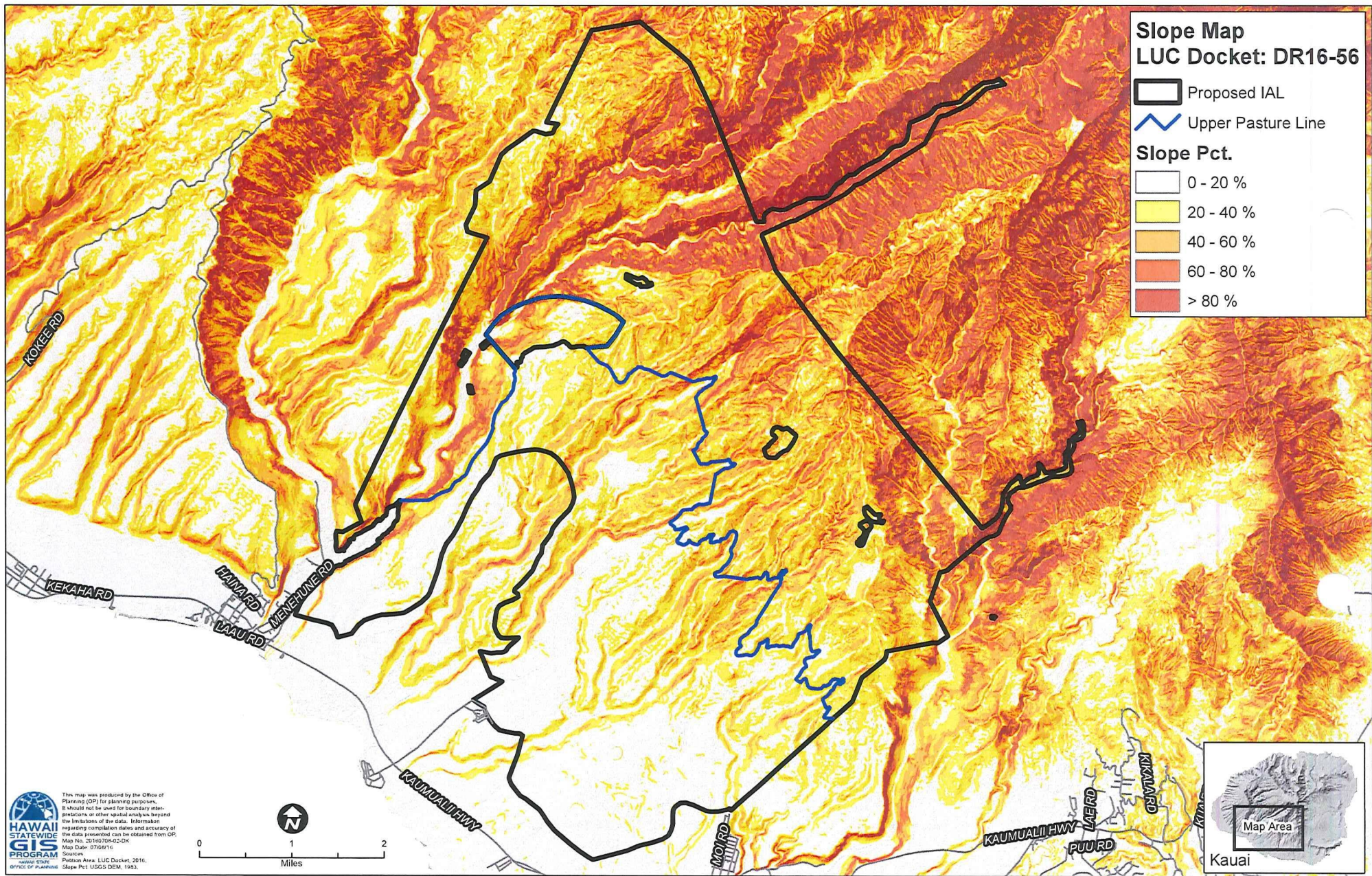


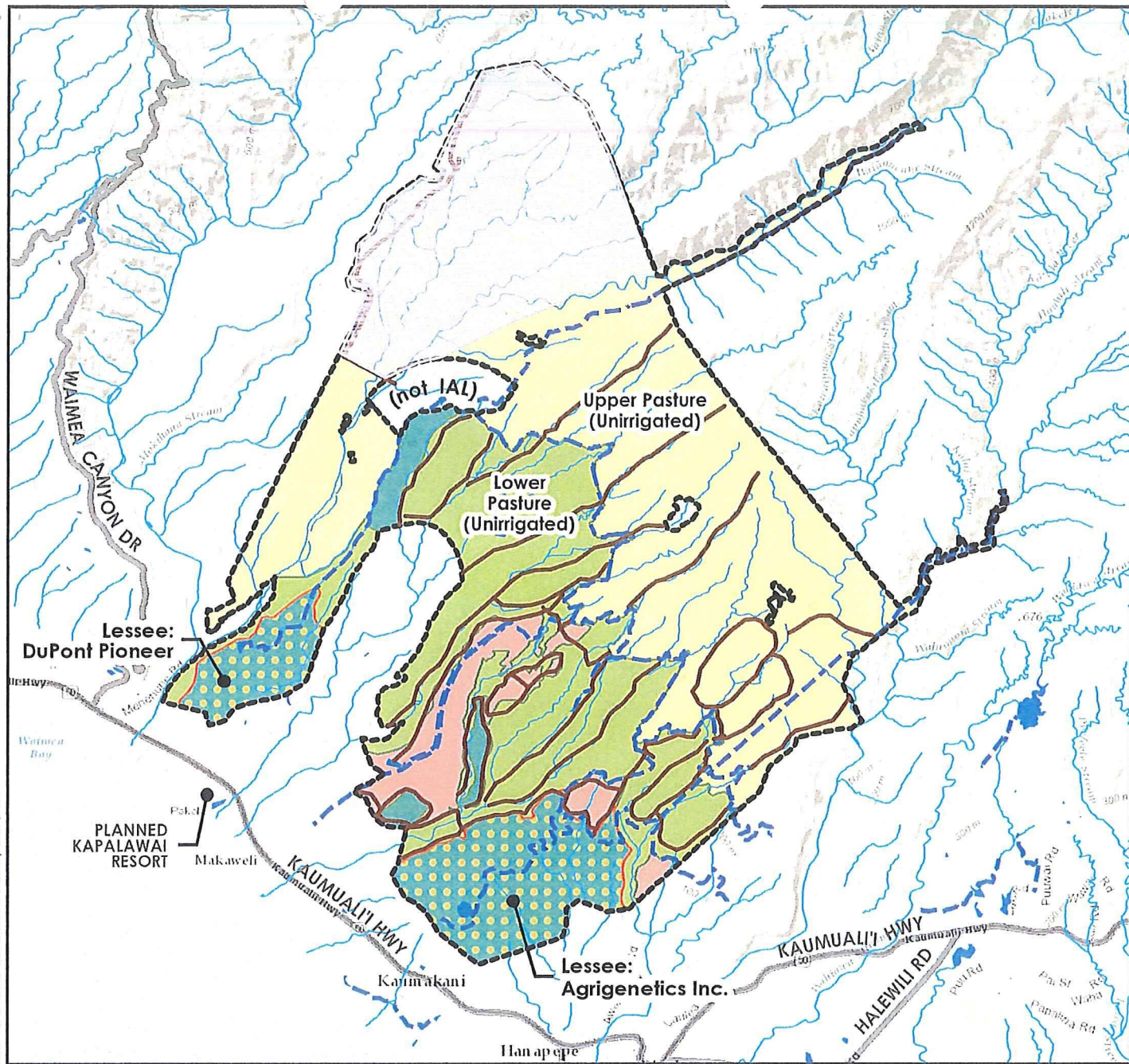
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KAUA'I CROP SUMMARY (2015)

**Department
of Agriculture**
STATE OF HAWAII





Amended:
7/27/2016

LEGEND

- Proposed IAL Boundary
- Leased Land
- Pasture Fence
- Streams
- Canals/Ditches
- Lakes/Reservoirs
- Northernmost Portion

Ranch Operation	Approximate Area (in acres)
Upper Pasture (year round breeding)	11,940
Lower Pasture (unirrigated)	5,255
Lower Pasture (irrigated)	400
Lower Pasture (potential irrigated)	1,105
Total:	18,700

Source: Robinson Family Partners, Inc. (2016), County of Kauai.
Disclaimer: This graphic has been prepared for general planning purposes only.

Figure 2b

Makaweli Ranch Operation

Robinson Family IAL

Island of Kauai

