

Kaua'i Seabird Habitat Conservation Program (KSHCP)

Participant Inclusion Plan (PIP) Template

**Name of Applicant/Participant**

**Kauai Coffee Company, LLC**

## **PART 1: Landowner & Property Information; Description of the Facilities; Avoidance & Minimization Measures; Monitoring of Take**

**Item 1. Provide the name of the landowner, business, agency, or institution and complete contact information. If the applicant/participant is different from the landowner, please attach power of attorney (or other documentation) allowing the party to act on the landowner's behalf.**

Participant/Applicant Name: Kauai Coffee Company, LLC

Physical Address/Location of Facility: 870 Halewili Rd, Kalaheo, HI 96741

Mailing Address: P.O. Box 530, Kalaheo, HI 96741

Primary Contact: Ownership Name: Massimo Zanetti Beverage USA, Inc.  
Address: 1370 Progress Road, Suffolk, VA, 23434  
Email: dnesmith@mzb-usa.com  
Telephone: (757) 215-7355

Alternate Contact: Name: Fred Cowell  
Address: P.O. Box 530, Kalaheo, HI 96741  
Telephone: (808) 335-3440  
Email: fcowell@kauaicoffee.com

Preparer Contact: Name: Dan Peck  
Address: P.O. Box 530, Kalaheo, HI 96741  
Email: DPeck@kauaicoffee.com  
Telephone: (808) 482-2169; (808) 634-9484

**Item 2. Provide the legal description of the property at which the existing facilities and Covered Activities are located, including Tax Map Key (TMK) number. Provide a survey of the property and site plan drawings showing the locations of the Covered Activities (lights), property boundaries, buildings & structures, and site features. If properties containing the Covered Activities comprise separate parcels please include all Tax Map Key numbers and maps.**

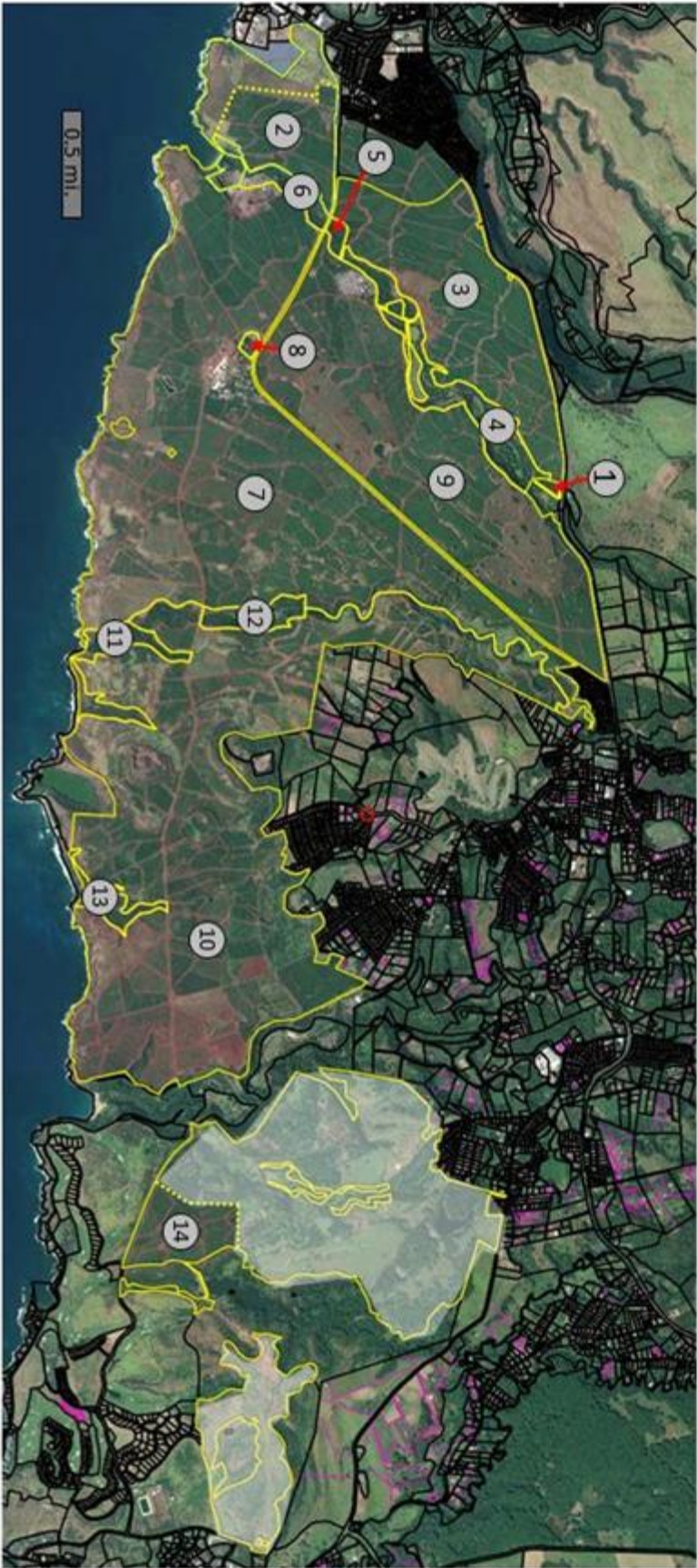
- The subject property is comprised of the following TMK #s:

(4) 2-1-001: 001	(4) 2-1-001: 037	(4) 2-3-010: 010
(4) 2-1-001: 003	(4) 2-2-001: 001	(4) 2-3-010: 011
(4) 2-1-001: 027	(4) 2-2-001: 004	(4) 2-3-010: 012
(4) 2-1-001: 035	(4) 2-2-001: 007	(4) 2-6-003: 001
(4) 2-1-001: 036	(4) 2-3-010: 001	

- A site map is included here with TMK listing, as well as a map highlighting the processing operations area.

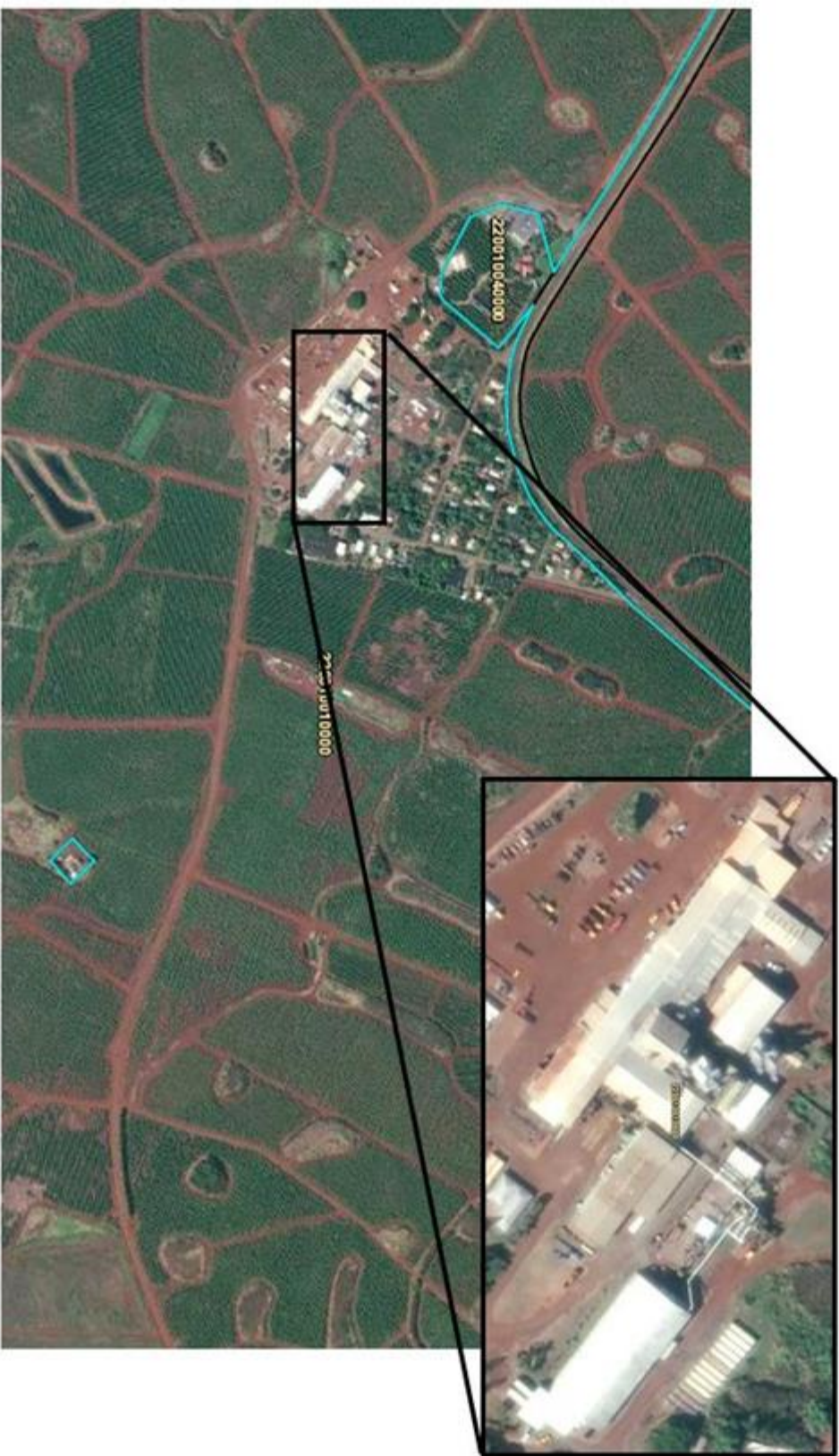
# Kauai Coffee Co., LLC Covered Activity TMK Parcels

1.	(4) 2-1-001: 001	8.	(4) 2-2-001: 004
2.	(4) 2-1-001: 003	9.	(4) 2-2-001: 007
3.	(4) 2-1-001: 027	10.	(4) 2-3-010: 001
4.	(4) 2-1-001: 035	11.	(4) 2-3-010: 010
5.	(4) 2-1-001: 036	12.	(4) 2-3-010: 011
6.	(4) 2-1-001: 037	13.	(4) 2-3-010: 012
7.	(4) 2-2-001: 001	14.	(4) 2-6-003: 001





Kauai Coffee Co., LLC Processing Operations Area  
TMK# (4) 2-2-001: 001



**Item 3. Describe the existing Covered Activities for which incidental take authorization is sought. Include list of buildings, type and description of lights present, purpose and location of lights and current seabird lighting accommodation in place (e.g. shielding, downward pointing, switched off during fledging season etc.). For “Types of lights” please use the following categories:**

- **Parking Lights**
- **Signage Illumination**
- **Wall-pack Building Lights**
- **Landscaping/Grounds/Accent/Bollards**
- **Indoor lights visible from outdoors**
- **Roof Floodlights**
- **Other Lights**

**Facility lighting plan may be submitted as lighting inventory. Photos may be attached. The suggested light table, and Green Sea Turtle assessment table below may each be modified as needed to provide the necessary information.**

- See attached maps. Coffee orchard harvesting take place in the fields, and coffee cherry processing operations take place in the region designated as the Processing Operation area.
- Honu Table Not Applicable.

List of Buildings	Type/Description of Lights Present	Location	Purpose of the Lights	Describe any measures implemented to avoid or minimize take impacts to Covered Species
	Parking lot pole light mounted on structure/bldg: 150W Mercury vapor (white)  Parking lot pole light Parking lot pole light	Wet Plant Pre Dryers Dryer Bins Waste Plant Vert Dryer 1 Berico 14/15 Field Office	Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security	Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down Direction of Light angle is down
<b>Wall-pack building lights:</b>	150W HiPresSodium 100W Mercury vapor 100W Metal Halide 100W HiPresSodium 175W HiPresSodium 400W Metal Halide 150W HiPresSodium 400W Metal Halide 400W Metal Halide 400W Metal Halide	ADS Entry Field Office Berico MCC Visitor Center Admin/Roast Factory Office Electric Shop Equip Shop Kanani Mill Pali Uli Mill	Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security	Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out
<b>Roof flood lights:</b>	60W Par Halogen 60W Par Halogen 100W CFL  60W Par Halogen 60W Par Halogen 60W Par Halogen 60W Par Halogen	Field Office Visitor Center Equip Shop  Carpenter Shop Carpenter Shop Carpenter Shop Carpenter Shop	Safety & Security Safety & Security Safety & Security  Safety & Security Safety & Security Safety & Security Safety & Security	Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down; and full cut-off/shielded fixture  Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out
<b>Other lights: Warehouse LED-Motion</b> <b>Wall Lantern LED</b>	400W Metal Halide 20W LED 100W CFL 20W LED	Wet Plant Field Office Visitor Center Visitor Center Visitor Center	Safety & Security Safety & Security Safety & Security Safety & Security	Direction of Light angle is down Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out
<b>Street Light on Building Wall</b> <b>Mounted Jelly Jar LED Motion LED</b> <b>Security Shack</b>	150W Mercury vapor 100W CFL 20W LED 40W LED 150W HiPresSodium	Visitor Center Admin/Roast Admin/Roast Fuel Station Security	Safety & Security Safety & Security Safety & Security Safety & Security Safety & Security	Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down & out Direction of Light angle is down Direction of Light angle is down & out
<b>Other Lights-Harvest Operations:</b>				

<b>Korvans (14)</b>	35W Halogen-200L	Harvester	Safety & Operation	Lights are angled down & out and/or shielded
<b>Korvan (1)</b>	180W LED-10K-L	Harvester	Safety & Operation	Lights are angled down & out and/or shielded
<b>Komatsu Loader</b>	18W LED	Harvester	Safety & Operation	Lights are angled down & out and/or shielded
<b>Hyundai Loader Light Plant</b>	180W LED-10K-L	Loader	Safety & Operation	Lights are angled down & out and/or shieldedDirection
	18W LED	Loader	Safety & Operation	of Light angle is down & out
	3,200L Halogen 1250W	Loader	Safety & Operation	Lights are angled down & out and/or shielded
	Metal Halide 150K-L	Light Plant	Safety & Operation	Lights are angled down & out and/or shielded

**Table 1: Lighting at Facilities**



**Table 2: Green Sea Turtle Assessment for the Site & Facility**

Please provide the information requested below to help determine if measures to avoid impacts to the Green Sea Turtle(s) from the effects of light attraction are required to be implemented at any of the facility(s), parcel(s), or site(s) included in this PIP. Please consult with staff from the DLNR and the USFWS to arrange a site visit, if needed, discuss measures to avoid impacts to the Green Sea Turtle, and provide further guidance.

Are any of the facilities located adjacent to a beach?	Yes / No <u>N/A</u>	If yes, provide length of beach frontage & brief description of facilities & lights adjacent to the beach
Are any of the Covered Activities (lights) visible from a beach?	Yes / No <u>N/A</u>	If yes, describe the specific lights (type, , height, purpose) & specific location; provide map & photos showing distance from beach
Have green sea turtles been known to nest on any beaches adjacent to the facilities?	Yes / No <u>N/A</u>	If yes, provide information about nesting occurrences, if known, including location and date and any other information

**Item 4. If applicable, describe any lighting standards (e.g., foot candles/area) required for facility operations or other requirements that necessitate the use of lighting (e.g., required for security, safety, operations). Describe the relevant standard, or regulation, and the areas and Covered Activities at the site (e.g., type of lighting) to which it applies.**

- Minimum lighting required for safe practices during 24-hour operations. For outdoor walking areas and open-air portions of the plant a minimum illumination to comply with OSHA workplace safety guidelines would be 5 candle-feet.
- Twenty-four hour operations only during harvesting season, approximately Sep – Dec for harvesting in the fields and Sep – Apr for processing operations.

**Item 5. Describe any plans/proposals for future facilities or expansion of existing facilities. Include any proposed structures and lighting by type, purpose, and location. Plans (architecture and site plans), photos, and drawings can be attached.**

None.

**Item 6. Pursuant to the Endangered Species Act (ESA), Section 10 (a)(2)(A)(iii), describe alternatives to avoid the taking considered and evaluated. Provide reasons why those alternatives are not being utilized. Alternatives can include operational or facility design changes (attach pages as needed). The tables below may be altered as needed.**

- Outdoor lighting has been modified to face downward. Shielding is installed where applicable.
- Night harvest operations will be delayed until 4 hours after sunset for three days either side of the October and November new moon.

**Table 3: Light Attraction Alternatives to the Taking**

Artificial Light Attraction Alternatives to the Taking Considered	Reasons Alternatives are not Being Utilized (provide justification)
<ul style="list-style-type: none"><li>▪ Deactivate <u>all</u> outdoor artificial lights from dusk to dawn during the fledgling fall-out season September 15 to December 15</li></ul>	Harvest operations curtailed from sunset + 4 hours during new moon.
<ul style="list-style-type: none"><li>▪ Change operations to eliminate the need for outdoor artificial lighting (e.g., from nighttime to daylight hours)</li></ul>	See above
<ul style="list-style-type: none"><li>▪ Shield all lights from visibility from the beach, or screen all Green Sea Turtle nests, from May 15 to December 15 to avoid impacting the green sea turtle (Green Sea Turtle)</li></ul>	N/A
<ul style="list-style-type: none"><li>▪ Other alternatives to the taking considered, if any. If facility is proposed, include alternative designs considered</li></ul>	

**Item 7. Describe all site-specific seabird minimization measures considered for the Covered Activities. This item should follow KSHCP minimization objectives and measures as specified in *Appendix E (Guidelines for Adjusting Lighting at Facilities)* of the KSHCP document. Please consult with staff from the DOFAW and the USFWS as needed. The suggested tables below can be altered as needed.**

Minimization measures modify the Covered Activities to reduce the effects of the activity on the Covered Species. KSHCP Participants will be required to implement minimization measures that apply to the facility to the “maximum extent practicable” per applicable state and federal laws which regulate incidental take license/permit issuance by the DLNR and the USFWS.

Minimization also entails searching and recovering grounded seabirds to minimize the chance of mortality. In addition, the presence of on-site predators (i.e. feral cats, dogs) should be controlled and removed because these animals can prey on grounded seabirds.

Provide justification, such as policies, regulations, or other rationale for measures that will not be implemented.



**Table 4: Seabird Light Attraction Minimization Measures Considered**

<b>Minimization Measures Considered</b>	<b>Feasible? (Y / N)</b>	<b>If not Feasible to Implement Measures, Provide Reason</b>
▪ Change time of light use (lights off earlier)	Yes	
▪ Deactivate unnecessary lights	Yes	
▪ Replace all outdoor lights with full cut-off fixtures	Yes	Where cost effective or otherwise will install shields
▪ Shield all outdoor lights with full cut-off shields	Yes	Fabrication and installation of full cut off shields where needed in progress
▪ Angle all lights downward	Yes	
▪ Lower intensity (lumens) of outdoor lights	Yes	
▪ Change bulb color to non-white spectrum	Yes	Change out program in progress
▪ Prohibit/control unleashed predatory animals; prohibit outdoor feeding of animals; require sealed rubbish containers	Yes	
▪ Provide Worker Seabird Awareness Training to staff	Yes	
▪ Provide outreach materials to staff & guests	Yes	
▪ Host Save Our Shearwaters (SOS) Aid Station	No	Not suitable for private property/agricultural operations.

**Item 8. Minimization Plans.** Provide a plan to minimize the effects to the Covered Seabirds due to the Covered Activities. KSHCP Participants will be required to minimize the effects of the Covered Activities to the “maximum extent practicable” per applicable state and federal laws which regulate take license/permit issuance. The KSHCP document provides minimization objectives and measures to follow.

The Minimization Plans should include the proposed minimization measures, timeline, and estimated cost for each facility. In this item, the Participant can include measures already completed or in place (new lights, shields, operational changes). Timeline should include estimated completion schedule, and annual schedule for minimization that will occur only during fledging season.

Minimization measures not yet determined but anticipated to occur at the facility; this section should include an estimated cost that will be earmarked for future minimization measures.

If applicable, the participant must provide the reasoning why certain measures will not be implemented. The suggested table below may each be altered to best describe the Minimization Plan. Attach additional pages, photos, and drawings as needed.

**Table 5: Lighting Minimization Measures**

List of Buildings	Minimization Measures	Cost to Implement	Responsible Staff	Timeline
Parking lot lights (2)	Minimization Measures 1. Down-direct all parking lot lights (in place-existing)	\$0	General Manager;	8 November 2016
Signage Lights (0)	Not Applicable	NA	General Manager;	NA
Wall-pack lights (40)	Minimization Measures 1. Wall-packs are down-directed full cut-off & shielded fixtures. Shield installation in progress for lights without shields.	\$8,000	General Manager;	August 2017
Landscaping & grounds lighting (0)	Not Applicable	NA	General Manager;	NA
Other Lights (25)	Minimization Measures 1.LED Motion Activated – Down Facing 2.Jelly Jar – Out and Down Facing 3. Factory Light at Wet Plant Receiving – Down Facing	\$0	General Manager;	8 November 2016
Operations  (7, 1, 5) Harvest Operations (84) (5) (5) (4) (4)	Minimization Measures 1. Remove & control on-site presence of loose predatory animals 2. Prohibit outdoor feeding of animals 3. Recover downed birds found on property & turn into SOS 4. Train staff regarding minimization measures 5. Provide seabird outreach to Inform guests and visitors 6. Deactivated: Milling wall packs, Eq.Shp street light, Visitor floods 7. 14.Korvan Harvesters – (6) 35W halogen 200 lumens/lamp 8. Korvan – 180W LED Light Bar, (2) 18W Small LED, (2) 35W halogen 9.Komatsu Loader – 180W LED Light Bar, (4) 18W LED 10.Hyundai Loader – Halogen Lamp 3,200 Lumens (4) 11.Light Plants – (4) 1,250W metal halide 150,000 Lumens	\$10,000	General Manager;	Items 1-5 30 November 2016



**Table 6: Seabird Mortality Minimization Plan**

Minimization Measures	Describe minimization method (e.g. trapping, outreach, enact policy)	Cost to Implement	Responsible Staff
Remove & control loose predatory animals at the facility. (Loose animals can kill grounded seabirds and this measure aims to prevent seabird mortality by animals.)	Trapping of feral cats. Factory area 2 traps checked daily multiple times throughout the day.	\$200.00 per month	General Manager; Department Manager, Safety Manager
Prohibit outdoor feeding of predatory animals. (Feeding animals attracts them to the site and this measure aims to reduce the presence of animals that can cause seabird mortality.)	Yes, integrated into training plan. Signs posted at time clocks, email blasts are sent and reminders weekly at before shift safety meetings by department managers.	N/A	General Manager; Department Manager, Safety Manager
Conduct nightly/morning searches to recover downed birds at the property & turn them into SOS following protocols (see monitoring plan below).	Awareness through training of all shift personnel. Bird search integrated into shift change operations in harvesting and processing.	N/A	General Manager; Field and Factory Supervisors and Managers, Safety Manager
Train staff to follow minimization measures.	Yes.	N/A	General Manager; Safety Manager

**Item 9. Take Monitoring Plan. Provide a plan to monitor take of the Covered Seabirds at the facilities proposed to be covered by the incidental take permit/license. The take monitoring plan describes how the property will be searched for downed Covered Seabirds. The KSHCP document provides standards and guidelines for take monitoring to ensure that take of the species is accurately measured and recorded.**

The regulatory agencies will make the final determination as to the adequacy of the take monitoring plan.



**Table 7: Covered Seabird Take Monitoring Protocols**

Please provide the following information for the protocol items below		
Item	Protocol (fill in protocol & provide reasons)	KSHCP Guideline
Percentage of the total property that will be searched & the total area to be searched	A perimeter search will be conducted around the Factory processing buildings and grounds which is approx. 5.0 ac, or 0.17 % of the total property. Harvested fields that will be monitored and searched are approx. 18 ac, or 0.60 % of the total property. This accounts for all portions of the property that conduct overnight, lighted operations.	Search as much area as possible
Frequency of searches (# per day or per week)	Factory perimeter search will be conducted twice daily. Harvest field search will be conducted once daily, but the skies will be continually monitored for seabirds by all personnel throughout the shift.	Twice daily
Time of day of searches	Factory perimeter search will be conducted at 10:00 PM and 5:30 AM. Harvest field search will be conducted at 5:30 AM, and the skies will be continually monitored for seabirds by all personnel throughout the night shift.	2-3 hours after sunset, and within 3 hours after sunrise
Number of searchers per search area	Harvesting = 10  Processing = 2	Depends on site conditions and safety considerations and vegetation, nearby hazards/threats
Proposed training	Annual training per guidelines (already being done). Additional training will be provided to harvest crew for recognition of typical seabird flight behaviors.	Annual training covering seabird identification, seabird handling, response procedures, verified and documented

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**Item 10. Components of the Green Sea Turtle Minimization and Monitoring Plan (if required). Monitoring and minimization for the Green Sea Turtle is in two parts: A) Monitoring to detect nests and B) Monitoring and minimizing impacts to nests detected.**

**Part A: Monitoring to detect Green Sea Turtle Nests**

Please provide the following information; the table below may be used and altered as needed.

- 1) Detailed location and description of beaches, including linear distance, at which searching for nests of the green sea turtle will take place. Searches should take place at any beach from which light at the facility can be viewed;
- 2) Monitoring protocols indicating:
  - a) Annual training of searchers;
  - b) Frequency of searches;
  - c) Conduct active searching (searching the beach width);
  - d) Sufficient number of trained searchers to cover the area; and
  - e) Record results of search monitoring.
- 3) All Participants are required to record the results of search efforts. Records should provide:
  - a) Evidence (what was seen). Include description and provide photographs
  - b) Location on the beach (GPS) and physically mark the location if possible
  - c) Date and time of day
  - d) Description of surrounding land use (e.g., vacant, or developed), and
  - e) Proximity to the facility.

**Part B: Monitoring of Identified Green Sea Turtle Nests**

Each identified nest of the green sea turtle should be monitored and protected from light attraction. Please provide the following monitoring protocols; the tables below may be used and altered as needed.

1. Light avoidance measure for identified nests (either shield/deactivate lights at the facility or install and maintain a light shield around each identified nest);
2. Frequency of searches;
3. Number of searches monitoring the nests. The number of needed to monitor active nests will depend on number of nests identified and amount of beach needed to be covered;
4. Record the results of nest monitoring. Monitoring should provide:
  - a. Evidence of hatchling emergence (description and photos):
  - b. Date and time of emergence,
  - c. Direction of tracks,
  - d. Condition of the nest area (e.g., disturbed or not).

**Table 8: Green Sea Turtle Monitoring Protocols – Part A: Monitoring to Detect Nests**

Please provide search protocols for detecting nests of the green sea turtle (Attach pages as needed)		
Item	Protocol (fill in protocol & provide reasons)	KSHCP Guideline
Location & description of the beach, or beaches, surveyed and the linear distance of the beach		Beach area surveyed should coincide with visibility from the facility with the lights
Frequency of searches (# per day or per week)		Weekly during nesting season (typ. May 15 to end of August)
Number of searchers per search area		Depends on site conditions and safety considerations
Proposed training		Searchers should receive annual training conducted by the DLNR or the USFWS, or their designee (See <b>item 9a</b> )

**Table 9: Green Sea Turtle Monitoring Protocols – Part B: Monitoring of Identified Nests & Minimization**

Please provide search protocols to monitor identified nests (from Part A) of the green sea turtle (Attach pages as needed)		
Item	Protocol (fill in protocol & provide reasons)	KSHCP Guideline
Frequency of checks (# per day or per week)		Active nests should be monitored every 1-2 days; then daily during expected hatching date
Light avoidance		If lights cannot be deactivated or shielded from the nest, each nest should be screened from visible light
Number of searchers per search area		Depends on site conditions and safety considerations

**Item 11. Describe the schedule that will be followed to provide training for staff. Training must be provided to those that will conduct and oversee the searches at the facility.**

The training should include:

1. Summary of regulations protecting the Covered Species; **As provided by KSHCP**
2. Search procedures, route, frequency and timing specific to the facility's monitoring plan, for seabirds and green sea turtle nests (if applicable); **Harvesting supervisors will be responsible for field/farm self-monitoring. Harvesting night shift supervisor will be actively searching in the vicinity of harvesting operations. Please see attached farm map for example. For instance, if harvesting is taking place in field 218 searches will commence throughout the field and on routes to and from the factory/shop areas. Searches will be done daily on scheduled work days, throughout the night shift (6p-4:30a) and beginning of the day shift (6a-9a).**
3. Response procedures including safe and proper techniques for handling seabirds; **See attached document**
4. Recognizing evidence of green sea turtle nests, proper nest light screening, and hatchling activity (if green sea turtle minimization and monitoring plan is applicable); **N/A**
5. Procedures to document the results of searches; **See attached document**
6. Downed wildlife agency contacts; and
7. Nearest SOS aid station. **Provided/Trained and placed in every recovery kit**

### **Rescuing Downed Seabirds—Standard Operating Procedures (SOP)**

The following steps provide the procedure for recovering downed seabirds found:

1. Take the seabird recovery kit and pet carrier to the downed seabird.
2. Put on gloves.
3. Using towel to gently cover the bird, pick up the seabird with wings folded in a natural position.
4. Place the seabird in the pet carrier, and close the pet carrier.
5. Put the gloves and towel back in the seabird rescue kit.
6. Take the bird and pet carrier to an SOS Aid Station. **Hanapepe or Kalaheo Fire Station**
7. Transfer the bird to the Aid Station's pet carrier.
8. Call SOS at 632-0610 or 635-5117.
9. Return the seabird rescue kit and pet carrier.
10. Complete the Bird Take Field Report.
11. Give the completed "Bird Take Field Report" to the General Manager, or other responsible staff person at the facility.

### **Contents of Seabird Recovery Kit**



1. Latex or nitrile gloves;
2. Three towels;
3. Hand sanitizer;
4. Flashlight or headlamp;
5. Clipboard, pen and blank "Bird Take Field Reports", or similar; and
6. Pet carrier –medium sized. If a box is used it must be well ventilated and marked conspicuously "LIVE ANIMAL".

**Please see attached photos of recovery kit contents. Kauai Coffee has 3 recovery kits. One for factory, one for field, and one spare for any other department use and/or for finding more than one bird.**

**Item 12. Describe any outreach conducted (e.g., handing out pamphlets on seabird awareness to facility employees or guests, etc):**

## PART 2. Take Estimate, Requested Amount of Take Authorization, and Funding

### Item 1. Show the calculation of estimated take for each of the Covered Species.

Following the take estimation methods in the KSHCP for estimating a Participant's take (Section 6.2.2), the tables below show the take estimate calculation for the facility(s) for each of the Covered Seabirds.

The KSHCP take estimate method utilizes the average of the most recent 5 years of SOS recovery data for the facility. Applied to the data is an adjustment for downed birds not found, based on a 50% discovery rate and an adjustment based on SOS mortality (birds dead on arrival or those that die in care) – average SOS mortality is 12%.

If the landowner-applicant submits a take estimate with an alternate discovery rate, they must provide the reasons why an alternate rate was used to estimate take, including relevant information supporting their reasoning (% of searchable area, search protocols that will be used, any searcher efficiency trials that have been or will be conducted at facilities and/or demonstration of quick, effective recovery of birds). Please include narrative and/or photos and maps to support this.

**Table 10: Annual Take Calculation**

	<b>Newell's Shearwater</b>	<b>Hawaiian Petrel</b>	<b>Band-rumped Storm- petrel</b>
<b>1. Annual average number (SOS data – or – monitoring data) of downed NESH (5 most recent years), HAPE or BRSP (15 most recent years)</b>	1	0	0
<b>2. Annual observed lethal take estimate (12% of 1, all downed birds)</b>	.12	0	0
<b>3. Annual unobserved lethal take estimate (e.g. 100% of 1, all downed birds if 50% searcher efficiency assumed)</b>	1	0	0
<b>4. Total estimated annual lethal take from light attraction (2+3)</b>	1.12	0	0
<b>Requested Annual Lethal Take</b>	1.12	0	0
<b>Requested Take Over Permit Term</b>	33.6	0	0



Item 2. Select the requested take authorization and permit/license term coverage for each of the Covered Species.

**Table 11: Newell's Shearwater:**

Age Class	Annual Take Estimate: Fledglings	Annual Take Estimate: Adults or Sub-Adults	Take Limit for License/Permit Term
Mortality (Lethal)	1.12		33.6
Injury (Non-lethal)	0.88		26.4

**Table 12: Hawaiian Petrel:**

Age Class	Annual Take Estimate: Fledglings	Annual Take Estimate: Adults or Sub-Adults	Take Limit for License/Permit Term
Mortality (Lethal)	0	0	0
Injury (Non-lethal)	0	0	0

**Table 13: Band-Rumped Storm Petrel:**

Age Class	Annual Take Estimate: Fledglings	Annual Take Estimate: Adults or Sub-Adults	Take Limit for License/Permit Term
Mortality (Lethal)	0	0	0
Injury (Non-lethal)	0	0	0

**Item 3. Funding Assurance.** Provide proof of adequate funding (see KSHCP document). All participants must demonstrate requisite funding prior to permit/license approval to ensure that the proposed measures and actions, including monitoring, will be undertaken in accordance with the terms and schedule of the KSHCP.

Fred Cowell  
Signature of Participant:

Date: 5/13/2020

FRED COWELL  
Printed Name :

The undersigned affirms that all the information included is true and accurate to the best of the participant's knowledge and that this PIP is voluntarily submitted.

☒ check to waive confidentiality

## **Appendices**

Appendix A – Kauai Coffee Lighting Pictures (PDF file included)