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LAND  
STATE PARKS

January 25, 2024

Endangered Species Recovery Committee (ESRC)  
State of Hawai'i  
Honolulu, Hawai'i

**SUBJECT:** Division of Forestry and Wildlife Evaluation of the Round-Leaved Chaff Flower (*Achyranthes splendens* var. *rotundata*) Habitat Conservation Plan (HCP) for the Kenai Industrial Park Project & Request to the ESRC to Revoke Incidental Take License (ITL; ITL-18) with a Recommendation to the Board of Land and Natural Resources (BLNR) to Impose Penalties and Administrative Fines

Dear Committee Members,

The Department of Land and Natural Resources (DLNR; Department), Division of Forestry and Wildlife (DOFAW; Division) kindly submits our request to the ESRC to recommend to the BLNR to revoke ITL-18 associated with the Round-Leaved Chaff Flower HCP due to negligence by the licensee to attain the success criteria and special conditions of the ITL and HCP. We also request that the ESRC recommends to the BLNR to impose penalties and administrative fines pursuant to Hawai'i Revised Statute (HRS) §§ 194D-4, 195D-9, and 195D-21.

DOFAW requests the ESRC review the annual report in accordance with the requirements outlined in Section 195D-25, Hawaii Revised Statutes. This submittal is a summary of the annual report and includes comments from DOFAW.

**BACKGROUND**

ITL Licensee: AKC Leasing Corporation

Project: Industrial development on a 0.75-acre parcel

ITL Duration: February 10, 2014 – February 9, 2024

Take Authorization:

Common Name	Scientific Name	Total Authorized Over ITL Duration
Round-leaved Chaff Flower	<i>Achyranthes splendens</i> var. <i>rotundata</i>	3 individuals and their seed bank

Status of ITL: All plants at the site were removed under the supervision of the State Botanist. Approximately 23,000 seeds were collected in 2014. Approximately 400 of the seeds collected were used to germinate plants at the Hui Kū Maoli Ola native plant nursery; the remainder are in storage at the Lyon Arboretum seed facilities. The Hui Kū Maoli Ola seeds were propagated and used for out-planting at the mitigation site.

Mitigation Status: Per the HCP, seeds were collected from the project site and were either stored or propagated for future out-planting at the mitigation site located at the Kalaeloa Unit of the Pearl Harbor National Wildlife Refuge.

A total of 159 plants were installed in four plots within the Kalaeloa Unit in November and December 2014. Each planting plot is approximately 12 × 12 meters (39.5 × 39.5 feet). In addition, four individual plants of Round-leaved Chaff Flower were planted outside of Plots 1–4 in November 2014, and this area was designated Plot 5. As of June 29, 2021, 0 outplants (0% of 159 planted) survived; therefore, the 75% survival by Year 5 outlined in success Criteria 1 would not have been met if it were still valid. Two seedlings reached at least six inches in height in FY 2021. In June 2021, 57 live newly out-planted individuals were included in the count bringing the total number of individual progeny at the project site to 121.

Success criteria for Year 5 of the monitoring include no fewer than 120 mature plants surviving, no mature kiawe trees present within the plots, less than 25% cover of herbaceous non-native plants, and more than 25% cover of native plants. At the end of FY 2021, there were 121 plants at the site (57 recently planted and not yet considered established), native plant cover ranged from 17-50% in the plots, and non-native plant cover ranged from 8-67% in the plots, and no mature kiawe trees were present in the plots. Weeding took place to ensure all plots met other success criteria.

Reports on the life expectancy of round-leaved chaff vary and range from two to 10 years; however, restoration managers generally agree that this species has a relatively short lifespan, relying on its high reproductive output to perpetuate its populations in the harsh, dry environments in which it is found. For this reason, in FY 2019, the ITL licensee and DOFAW discussed adjusting the survivorship criterion in the HCP to reflect that the species' lifespan often falls below this time period. In FY 2021, DOFAW finalized the ESRC's approval to omit success Criteria 1 as requested by the permittee.

DOFAW paid a site visit to the Kalaeloa Unit on September 27, 2021, and determined that only 64 *Achyranthes* still occurred there in FY 2022. None of these plants were those originally planted in 2014, and not all plants were mature. Therefore, the mortality rate of adult plants had exceeded the recruitment of new individuals, resulting in fewer

remaining *Achyranthes* than were in the founding population. Outplantings and seedlings had been watered throughout the dry season and were observed still watered during the site visit in early FY 2022. The provenance of the plants grown or out-planted for the project had not been suitably tracked. Recruitment of seedlings that survive through the dry season (without any supplemental watering) and seed production by at least 25% of the out-planted lineages still could not be determined in FY 2022. Excluding Criterion 1, DOFAW concluded that three out of the six remaining success criteria had not yet been met.

In April of FY 2022, DOFAW met with the licensee to discuss the fate of 100 *Achyranthes* cuttings in the licensee's possession that were taken from the mitigation site. While the licensee preferred to hand these cuttings over to DOFAW, the agency felt that they could not tend to them and suggested the licensee look for an alternative mitigation site to plant them. Although the Kalaeloa Heritage Park in Kapolei was discussed as a suitable site, no firm decision was made, and no further discussion or follow-up occurred between the licensee and DOFAW-HCP by the end of the fiscal year. However, the licensee worked with Kalaeloa Heritage Park to secure a site for the newly grown plants once they matured. The licensee also applied and obtained a Threatened/Endangered Rare Plant Permit through DOFAW, effective June 27, 2022.

During FY 2023, on September 12, 2022, the licensee transferred 103 plants from the Native Ecosystem Nursery to the DOFAW Nursery on Waimano, where DOFAW O'ahu Branch staff cared for them for around five months. Then, on February 3, 2023, the licensee retrieved those plants and transported them to the Kalaeloa Heritage Park for outplanting. Those plants and any naturally recruited progeny will remain at that site indefinitely. Under the DOFAW Permit I5122, the licensee will monitor the plants quarterly until February 2024.

## **ISSUES & CONCERNS**

The Division received letters from the licensee dated May 18, 2023, and August 8, 2023, requesting to terminate the Bond (No. LPM9170468) in the amount of \$197,500.00 associated with the Incidental Take License (ITL-18) and the Round-Leaved Chaff Flower (*Achyranthes splendens* var. *rotundata*) Habitat HCP for the KIP Project located in Kapolei, on the island of O'ahu. In the letters, AKC Leasing Corporation (the licensee) says that it has satisfied all ITL Special Conditions and the biological "Measures of Success" stipulated in Section 6.6 of the HCP.

However, in the end, the Department determines if the obligations of the ITL and HCP have been fulfilled. On multiple occasions, DOFAW has indicated that not all the measurable mitigation criteria outlined in the project HCP have been met (see Attachment #1). Additionally, DOFAW's recommended revised criteria were intended to make the success criteria easier to achieve while maintaining the conservation goals of mitigation efforts (see Attachment #4). DOFAW understands that the licensee has not agreed to the recommended revised criteria. Therefore, DOFAW must rely on the

original measures of success to determine whether the ITL and HCP obligations have been fulfilled.

### **AGENCY DETERMINATION**

In accordance with the Special Conditions set forth in the ITL-18, DOFAW determines that:

1. All *Achyranthes splendens* var. *rotundata* seeds visually found on the plants at the project site before grading must be preserved and stored for outplanting purposes, per the approved HCP.

**MET.** Previous reports and database records confirm that the seeds were collected, grown, and stored at the Seed Conservation Laboratory at the Lyon Arboretum Tissue Culture Facility on O‘ahu. These include approximately 23,000 seeds, from which 400 were used to germinate plants at the Hui Ku Maoli Ola native plant nursery for outplanting.

2. An authorized horticulturist/botanist experienced in the propagation and growing of Hawaiian plants will supervise the permanent removal of the naturally occurring population of *Achyranthes splendens* var. *rotundata* in accordance with the approved HCP.

**MET.** Hui Kui Maoli Ola removed plants in 2014 under the supervision of DOFAW’s State Botanist, Maggie Sporck. The incidental take of three plants was anticipated, but only two wild individuals were located at the time of removal. However, please consider the loss of the soil seed bank, which is the natural storage of seeds, often dormant, within the soil of most ecosystems.

3. There must be (a) recruitment of seedlings that survive through the dry season at the offsite mitigation area in the absence of any supplemental watering and (b) 25% natural seedling germination from seedlings of the outplanted lineages by Year 5.
  - a. **NOT MET.** Supplemental watering through the use of irrigation occurred beyond Year 5. This was confirmed by DOFAW personnel during a site visit with licensee representatives on September 27, 2021.
  - b. **NOT MET.** All the outplanted *Achyranthes* were observed to flower and produce fruit by Year 5. These plants were tagged and tracked; however, the plants’ lineage was not tracked, making it difficult to confirm that his sub-condition was met.
4. No fewer than 120 mature plants, including plants recruited from the planted lineages, will be established by Year 5.

**NOT MET.** DOFAW feels that the plants added to the mitigation site in 2021 should not be counted towards the total as they have not yet reached the age to be established and survive without supplemental watering.

Regarding overall project management, the 60 plants installed at the NWR in the summer of 2020 were not watered and did not survive. This was a preventable occurrence and did not comply with best management practices for out-planting Endangered plant species. SWCA staff reported little or no communication with their subcontractor (Matt Schirman, Hui Ku Maoli Ola) about watering the plants, and no follow-up monitoring was done to catch the mistake (i.e., lack of watering) in time. DOFAW staff met with SWCA in 2019, who were explicitly asked to plant only in the wet season; this, however, was not done in either 2020 or 2021.

Furthermore, per the Measures of Success outlined in Section 6.6 of the HCP, DOFAW determines that the following criteria were MET and NOT MET:

1. Outplanted individual survivorship:

a. 100% of the 120 out-planted individuals will survive by Year 1

**NOT MET.** Of the 155 plants initially out-planted on 11/25/2014 and 12/09/2014, 139 individuals survived as of the most recent monitoring at the end of July 2015. In all, 16 plants have died since installation (SWCA 2015<sup>1</sup>). Consequently, 35 individuals were out-planted in addition to the 120 individuals required under the HCP. DOFAW, therefore, considers that since 139 individuals survived at the site by Year 1, this measure of success was not fulfilled.

b. 95% of the 120 out-planted individuals will survive by Year 2

**NOT MET.** Of the 159 plants initially outplanted at the end of 2014 (including four individuals not originally included in the total count), 123 individuals had survived as of the most recent monitoring at the end of June 2016. In all, 36 plants have died since installation (SWCA 2016<sup>2</sup>). Overall, 123 individuals still survived by Year 2; therefore, DOFAW considers that only 77% of the out-planted individuals had survived by Year 2, and therefore, this criterion was not met.

c. 85% of the 120 out-planted individuals will survive by Year 3

**NOT MET.** Of the 159 individuals initially planted at the end of 2014, 95 originally out-planted individuals survived as of the most recent horticultural monitoring on

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<sup>1</sup> SWCA Environmental Consultants (SWCA). 2015. *Annual Report for the Kenai Industrial Park Round-Leaved Chaff Flower (*Achyranthes splendens* var. *rotundata*) Habitat Conservation Plan*. Available at: [https://dlnr.hawaii.gov/wildlife/files/2013/10/KIP-HCP-Annual-Report- SWCA\\_10082015.pdf](https://dlnr.hawaii.gov/wildlife/files/2013/10/KIP-HCP-Annual-Report- SWCA_10082015.pdf)

<sup>2</sup> SWCA Environmental Consultants (SWCA). 2016. *Annual Report for the Kenai Industrial Park Round-Leaved Chaff Flower (*Achyranthes splendens* var. *rotundata*) Habitat Conservation Plan*. Available at: <https://dlnr.hawaii.gov/wildlife/files/2013/10/KIP-Second-HCP-Annual-Report- Complete.pdf>

April 25, 2017. During the botanical monitoring on June 14, 2017, 93 of the original outplants survived (SWCA 2017<sup>3</sup>). As a result, 27 plants out of 159 didn't survive by Year 3. Thus, 16.98% of the 159 outplanted individuals survived by Year 3, less than 85%.

d. 75% of the 120 out-planted individuals will survive by years 4 and 5

**NOT MET.** By Year 4, of the 159 individual plants planted by December 2014, 74 originally out-planted individuals survived as of the most recent horticultural monitoring on April 12, 2018 (SWCA 2018). As a result, 74 plants, meaning 46.54% of the 159 outplanted individuals, survived by Year 4. Furthermore, by Year 5 of the project, it was determined that during the last horticultural monitoring on April 10, 2019, 50 of the originally out-planted individuals were alive (SWCA 2019). Consequently, 31.44% (50 of the 159 outplanted individuals) survived by Year 5.

As explained in our letter dated December 2, 2021 (*log no. 3454*), "DOFAW staff supported removing this criterion because it set unrealistic goals for the survival of the outplants. We felt, for instance, that transplant shock and other factors that are beyond the control of the license holder were not truly accounted for with this criterion. As documented, the SWCA out-plantings at the NWR did not survive as long as expected, potentially due to the impacts of alien invertebrate pests.

**However, we feel that the KIP FY 2021 Annual Report seriously misrepresents DOFAW's guidance as we did not agree to remove this criterion owing to a re-evaluation of the lifespan of *Achyranthes*. Plants grown from the same KIP stock by other permitted projects have reported plants that have persisted longer than five years at their out-planting sites, and wild *Achyranthes* have been observed to survive for at least ten years."**

2. There must be (a) recruitment of seedlings that survive through the dry season in the absence of any supplemental watering, and (b) seed production by at least 25% of the out-planted lineages by Year 5;
  - a. **NOT MET.** Although the annual report states that this criterion has been met, DOFAW disagrees. Both outplants and seedlings were watered through the summer of 2021 and were observed by DOFAW staff as still watered during the site visit on September 27<sup>th</sup>, 2021. The license holder and/or project staff also failed to track the provenance of the plants grown or out-planted for this project.
  - b. **NOT MET.** As previously stated, although all the out-planted *Achyranthes* were observed to flower and produce fruit, plants were not tagged and

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<sup>3</sup> SWCA Environmental Consultants (SWCA). 2017. *Annual Report for the Kenai Industrial Park Round-Leaved Chaff Flower (*Achyranthes splendens* var. *rotundata*) Habitat Conservation Plan*. Available at: <https://dlnr.hawaii.gov/wildlife/files/2013/10/Kenai-AchSpl-HCP-Annual-Report- FY17-final.pdf>

tracked, and it is therefore impossible for DOFAW to determine or confirm which outplants represent the KIP lineage. The plants currently held by the project contractor are from unknown lineages. As a result, this criterion has not been met because of supplemental watering through the dry season.

3. The number of seedlings recruited into the mature age class must be greater than the mortality rate of existing adult plants over five years, with minimum recruitment of 25% of the number of out-planted individuals over five years;

**NOT MET.** A total of 159 *Achyranthes* were planted in four plots by December 2014. Only 64 *Achyranthes* occurred at the NWR in 2021, none originally planted in 2014, and not all mature. The mortality rate of adult plants, therefore, has exceeded the recruitment of new individuals, resulting in fewer remaining *Achyranthes* than were in the founding population

4. No fewer than 120 mature plants, which will include plants recruited from the planted lineages, will be established by Year 5;

**NOT MET.** As explained in our letter dated December 2, 2021 (*log no. 3454*), DOFAW considers that the plants added to the mitigation site in 2021 should not be counted towards the total as they have not yet reached the age to be established and survive without supplemental watering.

5. Cover of herbaceous nonnative plants (e.g., buffelgrass, khaki weed, and golden crownbeard) will be less than 25% within planting sites by Year 5.

**NOT MET.** Per Section 4.2.4 of the FY 2019 Annual Report (SWCA 2019), the non-native plants, scarlet spiderling (*Boerhavia coccinea*) and buffel grass (*Cenchrus ciliaris*), had the highest overall cover for non-native species. Total average non-native cover varied in the quadrats between 1.60% and 25.80% in January and June 2019.

6. No mature kiawe trees will be within the planting sites over the five years.

**MET.** During the site visit done by DOFAW staff in September 2021, no mature kiawe was detected within the planting sites, exceeding the five-year period.

7. Native species cover within the planting sites will be greater than 25% by Year 5.

**MET.** As reported in Section 4.2.4 of the FY 2019 Annual Report (SWCA 2019), during the four horticultural monitoring events conducted from July 27, 2019, to April 10, 2019, the estimated percentage cover of native plants ranged from 28% in Plots 1 and 4 in July 2018, to 53% in Plot 2 at the end of the reporting year in April 2019. Native cover fluctuated slightly between and within all plots, decreasing during dry periods (July 2018) to between 28% and 55% within the plots and ranging between 17% and 60% in October 2018, with increased

rainfall. Plots were regularly weeded, although some of the reporting periods took place before the maintenance crew was out at the site and after a heavy rain, resulting in non-native cover being higher than the native cover. During these instances, the maintenance crew was notified immediately, and weeding took place to address the overgrowth.

## **AGENCY RECOMMENDATIONS**

The Division requests that the ESRC recommend to the Board of Land and Natural Resources that:

- (1) The HCP and ITL issued to AKC Leasing Corporation be revoked due to failure to fulfill certain ITL and HCP obligations; and
- (2) AKC Leasing Corporation should be subject to administrative penalties pursuant to HRS §§ 194D-4, 195D-9, and 195D-21;
  - a. The administrative penalties shall be based upon the Division's assessment of the costs that will be required to fulfill the unmet obligations of the ITL and HCP and to cover any unmitigated take; and
  - b. The administrative penalties collected by the Division shall be utilized to further support the recovery goals of the species, as outlined and unfulfilled by KWP in the HCP.

If you have any questions, please contact Katherine Cullison, Programmatic Habitat Conservation Plan Coordinator, via email at [katherine.cullison@hawaii.gov](mailto:katherine.cullison@hawaii.gov).

Respectfully submitted,



DAVID G. SMITH  
Administrator

### Attachments:

- Attachment 1- Formal Letter to Licensee from DOFAW- 12/2/2021
- Attachment 2- SWCA Response on Behalf of the Licensee- 3/4/2022
- Attachment 3- Licensee Response Letter-10/19/2022
- Attachment 4- Formal Letter to Licensee from DOFAW- 11/25/2022
- Attachment 5- Attorney Letter Request to Terminate Bond- 5/18/2023
- Attachment 6- Formal Letter to Licensee Attorney from DOFAW-10/02/2023
- Attachment 7- Licensee Attorney Response Letter-11/1/2023