

# Kauai Lagoons Habitat Conservation Plan

## Annual Report November, 2013

### I. Introduction

In 2012, the U.S. Fish and Wildlife Service (USFWS) and the Hawaii Department of Land and Natural Resources (DLNR)/Division of Forestry and Wildlife (DOFAW) approved the Habitat Conservation Plan (HCP) prepared by Kauai Lagoons LLC and issued to Kauai Lagoons an Incidental Take Permit and Incidental Take License, respectively. The effective date of those incidental take authorizations was November 9, 2012.

Section 8.5 of the HCP requires that Kauai Lagoons produce and submit an annual HCP compliance and monitoring report to both agencies by September 30 of each year.<sup>1</sup>

### II. One-Time Obligations

#### A. Nēnē Mitigation Payment (HCP Section 4.4.1.6)

Requirement: A one-time payment of \$85,000 to the DLNR Endangered Species Trust Fund. DLNR is to use these funds to control predators and/or manage Nēnē at a translocation site.

Status: Completed (May 2012)

### III. Ongoing Obligations

#### A. Financial Assurances (Section 6.4)

Requirement: Post a bond or letter of credit in the amount of \$153,667. Under Section 7.2 of the HCP Implementing Agreement, the bond term must be two years, and a Continuation Certificate must be sent to DLNR with a copy to USFWS at least six months prior to expiration of the bond.

Status: Completed (December 2012). Initial bond expires November 9, 2014.

#### B. Training (“Endangered Species Awareness Program”) (Section 4.2.1.1)

Requirement: All new employees and contractors go through the training program detailed in the HCP.

Status: The training module was updated for the season. Reginald David, retrained the HR trainers prior to the start of the season, and also retrained the security team, who are

---

<sup>1</sup> This first Annual Report is being submitted following the first full year of HCP implementation, which officially began on November 9, 2012. Subsequent Annual Reports will be submitted by September 30 of each year.

designated as our first responders. All new employees were given the training by HR personnel as part of their orientation and safety training.

**C. Construction Contract Provisions (Section 4.2.1.2)**

Requirement: Develop provisions and restrictions to avoid and minimize take of Covered Species, and insert into all new construction contracts.

Status: No new construction with the potential to affect Covered Species occurred during the reporting period.

**D. Pre-Construction Surveys (Section 4.2.1.3)**

Requirement: A biological monitor must survey any new mass grading areas immediately prior to mass grading.

Status: No new mass grading occurred during the reporting period.

**E. Biological Monitor (Section 4.2.1.4)**

Requirement: Designate two biological monitors.

Status: In compliance. The two monitors designated in the HCP (Alan Silva and Reginald David) remain the designated monitors. Al Silva worked roughly half time for the entire year. A full time biological monitor Jennifer Hahn was brought on staff at the beginning of the Nēnē nesting season, she worked through the end of the fledgling season in April 2013.

**F. Construction Monitor (Section 4.2.1.5)**

Requirement: Use one or more construction monitors during periods of active grading or earth moving.

Status: No active grading or earth moving occurred during the reporting period.

**G. Fencing (Section 4.2.1.6)**

Requirement: Where feasible, erect and maintain solid fencing around discrete construction areas, to prevent Covered Species from walking into such areas.

Status: No construction occurred during the reporting period to which this provision would apply.

**H. Best Management Practices (Section 4.2.1.7)**

Requirement: Implement the specific BMPs contained in Section 4.2.1.7 (e.g., speed limits, signage, trash receptacles).

Status: In compliance.

**I. Roadways (Section 4.2.2.1)**

Requirement: Post permanent speed limit and Covered Species warning signs, and speed bumps as necessary.

Status: Done - in compliance.

#### **J. Lighting (Section 4.2.2.2)**

Requirement: Ensure that lighting associated with construction of new structures is bird friendly; as new buildings near completion, qualified biologist to inspect lighting after dark to ensure light attraction has been minimized to the maximum extent practicable; analyze onsite seabird fallout monitoring data on an ongoing basis to determine if particular areas within the resort attract downed birds on a regular basis, and if so then take steps to redesign, reconfigure or eliminate potential light attraction sources.

Status: In compliance. No new structures were built during the reporting period. Two downed seabirds were found on the property near the Kalanipu‘u buildings in October 2012. Biologist Reginald David, accompanied by Michelle Bogardus of the USFWS, subsequently conducted a nighttime evaluation of the Kalanipu‘u buildings and determined that no additional lighting reductions were required. Two additional downed seabirds were found on the property near the Kalanipu‘u buildings in early November 2013. Following the conclusion of the 2013 seabird fallout season, a further evaluation of lighting at the Kalanipu‘u complex will be undertaken.

#### **K. Grounds Management and Maintenance (Section 4.2.2.3)**

Requirement: Grounds management crews must go through the training described in Section 4.2.1.1, and must coordinate with the biological monitors as needed.

Status: All employees have received training and during the season communicated effectively with the biological monitors over potential issues with endangered waterbirds.

#### **L. Rules, Education for Resort Owners and Renters (Section 4.2.2.4)**

Requirement: Covenants, Conditions and Restrictions (CC&Rs) will address issues such as trash receptacles, trash disposal, landscape design, etc.; endangered species information and education tools will be developed to educate owners and visitors regarding endangered species issues, restrictions, and special seasonal protocols.

Status: In compliance.

#### **M. Golf Operations (Section 4.2.2.5)**

Requirement: Golf course Starters and Marshalls must attend additional training from the Biological Monitors in addition to the standard training described in 4.2.1.1; morning briefings for golf course personnel will include updates on Covered Species presence; the Starter will inform each golfer about the potential presence of Covered Species and appropriate precautions; an educational kiosk will be established at the Starter location; golf carts will contain a placard replicating information from the kiosk; warning signs will be posted if a Covered Species establishes a nest within the golf course; golf course to establish a local rule for golf play allowing movement of a ball away from nest areas.

Status: Done – in compliance

**N. Maintenance of On-Site Nesting Areas (Section 4.4.1.2)**

Requirement: Previously enhanced nesting areas shall not be maintained, and supplemental grain feeders shall not be provided on lagoon islands; limited areas of the resort grounds will be managed and maintained as determined and directed by DOFAW and USFWS.

Status: In compliance.

**O. Emergency Response Protocol (Section 4.4.1.4)**

Requirement: Implement the protocol contained in HCP, Appendix I.

Status: In compliance.

**P. Facilitate DOFAW removal of Nēnē (Section 4.4.1.5)**

Requirement: As appropriate, lend support to DOFAW efforts to capture and translocate Nēnē.

Status: In compliance. Kauai Lagoons regularly provides access and golf carts to DOFAW staff for their use in DOFAW's Nēnē capture and translocation efforts. Our biologists also provided nesting and breeding data upon request to the Kauai DOFAW staff throughout the season.

**Q. Predator Control (Section 4.4.2)**

Requirement: Deploy 10 live traps during the period September 15 to March 15 in areas of the property frequented by waterbird Covered Species; check live traps every 48 hours and deliver trapped cats to Kauai Humane Society; deploy rodent bait stations in same areas during this same timeframe; control cattle egrets and feral chickens.

Status: Eighteen live traps were deployed though out the season, and moved to new areas, after cats were detected. A total of 9 cats were removed from the property. Rodent control continues year-round, Sixteen rats were caught in rat traps A total of 294 feral chickens were removed using trapping and air rifles. Four Cattle Egrets were removed from the property during the season. All bird control was conducted under a state Wildlife Depredation.

**R. Seabird Mitigation Payments (Section 4.4.3; HCP Amendment of September 2013)**

Requirement: Contribute \$10,000 annually to the Listed Hawaiian Seabird Conservation Account administered by the National Fish and Wildlife Foundation. The 2013 payment shall be made by November 1, 2013, and subsequent payments shall be made by September 15 of each year.

Status: Completed. Payment received by NFWF on October 21, 2013.

**S. Nēnē Monitoring During Nesting Season (Section 4.5.3)**

Requirement: Biological monitors to monitor Nēnē nesting activity and nesting success on a daily basis starting September 15 and ending on March 31 each year. Monitoring data to be collected includes band numbers, pair bonds, nest location, eggs laid, eggs hatched, goslings fledged, and reported mortalities. In addition, perform monthly monitoring during the remainder of the year (April through August), recording the number of Nēnē on the property and observed band numbers.

Status: Please refer to the attached “Kaua‘i Lagoons Endangered Waterbird Monitoring Report 2012-2013”

**S. Waterbird Monitoring (Section 4.5.4)**

Requirement: As part of the comprehensive Nēnē monitoring efforts, the biological monitors will also record information about all observed covered waterbird species on a weekly basis between September 15 and March 31 each year, and on a monthly basis from April through August each year. To include observations regarding waterbird numbers, nest locations, eggs laid, eggs hatched, goslings fledged, and reported mortalities.

Status: Please refer to the attached “Kaua‘i Lagoons Endangered Waterbird Monitoring Report 2012-2013”

**T. Seabird Monitoring (Section 4.5.5)**

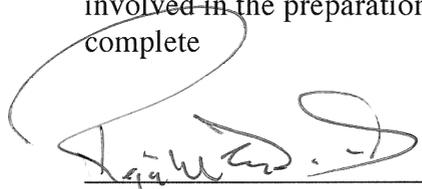
Requirement: Kauai Lagoons security staff will record all downed seabirds recovered on the property; biological monitors will evaluate security staff search efficiency and carcass removal rates<sup>2</sup>; biological monitors will record the results of their own additional searches performed during the expected peak of the seabird fallout season

Status:

Both security personnel and the two biological monitors were re-trained in seabird search and handling techniques prior to the start of the seabird fallout season. Security personnel conducted searches on an ongoing basis as part of their usual patrols. The biological monitor searched the buildings and perimeters surrounding them every morning for downed seabirds during the September 15<sup>th</sup> – December 15<sup>th</sup> fallout season.

Certification (Implementation Agreement, Section 8.3)

I certify that, to the best of my knowledge, after appropriate inquiries of relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete



Reginald David,  
Biological consultant, Rana Biological Consulting

Nov 26 2013  
Date

<sup>2</sup> Although the HCP states that this was to occur in Fall 2012, the delayed approval of the HCP by the USFWS (until November 9, 2012) precluded that from occurring.



## Kaua'i Lagoons Endangered Waterbird Monitoring Report 2012-2013

### Nēnē Nesting Observations

The 2012-2013 Nēnē (*Branta sandwicensis*) nesting season began in October 2012 with the first two nests located on the 9<sup>th</sup> of the month. The first observed hatch-dates occurred October 31<sup>st</sup>, suggesting that the first actual nest dates were around the 1<sup>st</sup> of October. 89 total nests, from 77 different pairs, were discovered on Kaua'i Lagoons property during the 2012-2013 nesting season including: 5 in October, 37 in November, 44 in December, 1 in January and 2 in February (Sheet 1). Nēnē pairs were monitored daily from October to April and data was compiled into an excel database. This monitoring data includes: Nēnē pairs, nests and gosling survival; DOFAW translocations and banding; avian mortalities; waterbird surveys; trapping summary; analysis of Nēnē population data and a map with Nēnē nest locations. All nests that produced goslings were located.

The 89 nests produced 275 eggs of which 193 hatched equaling a hatch rate of 70.18%. Of these 193 hatchlings, 127 were observed alive at Kaua'i Lagoons at last survey or date of their translocation representing a hatchling survival rate of 65.80% (Figure 1). In the 2012-2013 nesting season 80.90% of nests successfully hatched while the other 20.22% failed due to other causes (see Figure 2). Egg fates were also recorded (Figure 2). Measurements were taken of eggs that failed to hatch and were collected. Viability was determined for each of these unhatched eggs by examining the contents of the egg (Sheet 9). Of the 58 eggs examined, 34 were viable (58.62%) and 24 were infertile (41.38%).

Figure 1 (from Sheet 1)

| Eggs Laid | Eggs Hatched | Gosling Count At Last Sighting | Hatch Rate | Hatchling Survival Rate |
|-----------|--------------|--------------------------------|------------|-------------------------|
| 275       | 193          | 127                            | 70.18%     | 65.80%                  |

Figure 2 (from Sheet 11)

| Egg Fates          |            | Percentage | Nest Fates              |           | Percentage |
|--------------------|------------|------------|-------------------------|-----------|------------|
| Abandoned          | 14         | 5.1%       | Hatched                 | 71        | 79.8%      |
| Disappeared        | 4          | 1.5%       | Abandoned               | 9         | 10.1%      |
| Predated           | 1          | 0.4%       | Predated                | 1         | 1.1%       |
| Smashed            | 9          | 3.3%       | Flooded                 | 1         | 1.1%       |
| Flooded            | 2          | 0.7%       | Failed to Hatch         | 5         | 5.6%       |
| Failed to Hatch    | 48         | 17.5%      | Unknown                 | 1         | 1.1%       |
| Hatched            | 193        | 70.2%      | All Eggs Were Runt Eggs | 1         | 1.1%       |
| Runt Eggs          | 2          | 0.7%       |                         |           |            |
| Unknown            | 2          | 0.7%       | Number of Renests:      | 11        | 12%        |
| <b>Total Eggs:</b> | <b>275</b> |            | <b>Total Nests:</b>     | <b>89</b> |            |

Nesting pairs were compared between 2009-2012 (includes 3 nesting seasons) and the current 2012-2013 nesting season. Data show that 55 pairs (71%) nested at Kaua'i Lagoons property in the 2012-2013 nesting season that had not nested there for any of the previous 3 seasons. Of these pairs, 1 was a male Nēnē that nested with two partners this season, only one of which was a new partner (Sheets 10 and 11).

## Nēnē on Site

In addition to the 153 individual Nene (77 pairs) that nested on-site, and their 127 surviving goslings, additional Nēnē utilized the property that did not nest on site. To represent all Nēnē on site we have compiled Sheet 3 “Birds On Property” displaying all Nēnē sighted at Kaua’i Lagoons between October 2012 and April 2013, including the nesting pairs (Figure 3).

Figure 3 (from Sheet 3)

| Banded Nēnē | Unbanded Nēnē (est) | Surviving Goslings | Total Nēnē at KL (est)* |
|-------------|---------------------|--------------------|-------------------------|
| 216         | 29                  | 127                | 372                     |

\*Not sighted all at once. This is the number of Nēnē sighted on property over the span of one nesting season.

## Nēnē Translocation

Thomas Ka’iakapu and Kara A. K. “Bongo” Lee of the Hawai’i Department of Land and Natural Resources executed 6 separate translocation capture efforts during the 2012-2013 season. DLNR avoided capturing birds during the nesting period, and resumed the effort targeting “families” after clutches had hatched and goslings had had several weeks to mature. On January 15<sup>th</sup> 1 pair and 3 goslings were captured, February 5<sup>th</sup> 8 pairs and 24 goslings, February 25<sup>th</sup> 7 pairs and 18 goslings, March 5<sup>th</sup> 13 pairs and 42 goslings, March 18<sup>th</sup> 16 pairs and 34 goslings, and on April 15<sup>th</sup> 4 pairs (including 1 pair without a brood), and 5 goslings. In total DLNR captured 223 birds for translocation including 97 adult Nene and 126 goslings (Figure 4, Sheet 4).

Figure 4 (from Sheet 4)

| Date         | Families  | Adults    | Goslings   | Total Nēnē |
|--------------|-----------|-----------|------------|------------|
| 1/15/2013    | 1         | 2         | 3          | 5          |
| 2/5/2013     | 8         | 16        | 24         | 40         |
| 2/25/2013    | 7         | 14        | 18         | 32         |
| 3/5/2013     | 13        | 26        | 42         | 68         |
| 3/18/2013    | 16        | 31        | 34         | 65         |
| 4/15/2013    | 3         | 8         | 5          | 13         |
| <b>Total</b> | <b>48</b> | <b>97</b> | <b>126</b> | <b>223</b> |

No Nēnē were banded and released at Kaua’i Lagoons this season. All banded individuals were banded by DOFAW with unique gray bands for translocation and release on Big Island or Maui (Sheet 7).

## Mortalities

A total of 20 avian carcasses were found on-site during the winter season and 3 injured birds were found on-site that died off-site, making a total of 23 avian mortalities. A species breakdown and total is represented below (Figure 5). Relatively intact carcasses are collected and submitted to U.S. Geological Survey-Biological Resources Division.

Figure 5 (from Sheet 5)

| Avian Mortalities on Site |                            |
|---------------------------|----------------------------|
| Species                   | Total                      |
| Hawaiian Goose            | 13 (2 adults, 11 goslings) |
| Hawaiian Duck             | 3                          |
| Pacific Golden Plover     | 1                          |
| Hawaiian Coot             | 4                          |
| Hawaiian Stilt            | 1                          |
| Hawaiian Gallinule        | 1                          |
| <b>Total</b>              | <b>23</b>                  |

### Waterbird Surveys

Waterbirds on Kaua'i Lagoons property including Nēnē, A'eo (Hawaiian Stilt), 'Alae 'ula (Hawaiian Gallinule), 'Alae ke'oke'o (Hawaiian Coot), Koloa Maoli (Hawaiian Duck), and 'Auku'u (Black-Crowned Night Heron) were counted weekly (Sheet 8). Surveys were done by golf cart or by foot; therefore birds that could only be seen by boat were not counted. Averages were totaled for 21 separate weekly counts between October 16<sup>th</sup> and April 11<sup>th</sup> (Figure 6). Nēnē numbers were only averaged for the surveys before translocations began.

Figure 6 (from Sheet 8)

| Averages for Waterbird Surveys 2012-13 |      |      |                |            |         |       |
|----------------------------------------|------|------|----------------|------------|---------|-------|
| Koloa Maoli                            | Nēnē | A'eo | 'Alae ke'oke'o | 'Alae 'ula | 'Auku'u | Kōlea |
| 40                                     | 143  | 6    | 102            | 23         | 13      | 147   |

### Depredation Totals

Invasive species and predator trapping was also carried out over the 2012-2013 Nēnē nesting season. Traps were removed during the months the majority of young goslings were on property (December-March). In addition to trapping, chickens and cattle egrets were shot with a pellet gun or caught by hand and euthanized. The total number of chickens euthanized includes young chicks as well as adults (Figure 7).

Figure 7 (from Sheet 11)

| Depredation Totals 2012-13 |     |
|----------------------------|-----|
| Trapping Days:             | 42  |
| Traps Used:                | 18  |
| Cats Trapped:              | 9   |
| Rats Trapped:              | 16  |
| Chickens Trapped:          | 18  |
| Cattle Egrets shot:        | 4   |
| Chickens caught/shot:      | 294 |