

**Cyanotech Corporation Conservation Plan for
Hawaiian Stilt (*Himantopus mexicanus knudseni*)
Annual Report for 2014**



Prepared by J. Scott Waddington

Ho'omalū LLC

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Facility Management

Former Nesting Habitat

The former nesting habitat was attempted to be maintained in a manner that did not encourage stilts to frequent it. The basin was utilized as originally intended as a collection area for waste product. The collection of biomass was conducted intermittently throughout the year. These actions have resurfaced the bottom of the habitat and it no longer resembles the nesting habitat that the stilts were once utilizing. The basin was monitored daily as part of normal operations.

Nesting and Incidental Take

Past hazing efforts have been successful in reducing the numbers of stilts frequenting the facility especially during the day. The stilts have become used to the activities at the facility and have increasingly been roosting at the facility at night. The numbers of stilts frequenting the facility at night has remained steady this past year. The number of stilts roosting at the facility rarely exceeded 10 individuals this past year. Stilt activity at the Cyanotech facility coincides with increased usage by stilts of Kapo`ikai (Opae`ula) wetland to the north of the facility and the continued use by stilts at Kealakehe wastewater treatment plant to the south. Distance wise the Cyanotech facility is approximately in the middle of these two sites.

Nesting

There were three nests, with 11 eggs total and one hatchling observed in the former nesting habitat at the Cyanotech facility. The staff was informed not to disturb the nesting pairs and nests and not to alter or use the basin until the nesting is done. Efforts were made to keep water in the evaporation basins from production processing to establish a habitat area and invertebrate food base for the hatchlings. The evaporation basins are approximately 100 meters to the south of the nesting habitat. The hatchling was observed at the evaporation basins only for a couple of days. The fate of the hatchling and remaining eggs is unknown.

Incidental Take

Monitoring for injured or dead stilts was conducted daily as part of normal operations of the production raceways. Surveying the raceways for debris was conducted daily in an effort to protect the mechanical and harvest systems of the production raceways. Surveying the raceways visually is conducted first thing in the morning, before the paddlewheels are turned on. There was one stilt recovered this past year. A mortality report (Exhibit A) was

submitted to the wildlife agencies on 15 April, 2014. The stilt was collected on 14 April, 2014. The remains were in poor condition and not suitable for necropsy.

Property Outside of Cyanotech Boundaries

Lava Field of Keahole International Airport

The lava field adjacent to the Cyanotech facility, where stilts had nested in past years, was monitored weekly during the nesting season for nesting activity. Surveys were conducted every Monday during the nesting season. A Nikon 20 x 60 Field scope and Zeiss 10 x 40 binoculars were used to survey the lava field. There was no nest observed in the lava field of Keahole International Airport. On two occasions, a stilt pair was observed in the lava fields, but no nests or nesting behaviors were observed. It is suspected that the stilts were moving between the Cyanotech facility and the water treatment plant at Keahole International Airport.

References

Evans, K. and Uyehara, K. 2001. A Conservation Plan for Hawaiian Stilt at Cyanotech Aquaculture Facility Keahole Point, Hawaii. Ducks Unlimited Inc. 76 p.

(Exhibit A)

Collection report

Scientific Name: *Himantopus mexicanus knudseni*

Common Name: Hawaiian stilt

Specimens: 1 carcass

Collector: Darin Debina, Field Technician Cyanotech Corporation (address: 73-4460 Queen Kaahumanu Highway, Suite 102, Kailua-Kona, HI 96740; tel: 808-329-1353)

Date Collected: April 14, 2014

Location: Cyanotech Corporation, Keahole Point, Hawaii.

Collection Information: Recovered from Spirulina production raceway 65. Poor condition. Remains bagged, labeled and put in freezer.