

Kawailoa Wind Habitat Conservation Plan FY 2018 Annual Report



Kawailoa Wind, LLC

Presentation to Endangered Species Recovery Committee
March 6, 2019

Presentation Overview

1. Searcher Efficiency and Carcass Persistence Trials
2. Documented Fatalities and Estimated Take
3. 'Uko'a Bat Mitigation



Searcher Efficiency and Carcass Persistence Trials

- Bat surrogates
 - 90.0% searcher efficiency
 - 0.90 persistence probability
- Medium-sized birds
 - 92.3% searcher efficiency
 - 0.91 persistence probability
- 3.5 day search interval



Documented Fatalities - Listed Species

Date Documented	Turbine	Distance to Turbine (meters)
Hawaiian Hoary Bat		
August 22, 2017	30	11
August 22, 2017	30	5
August 28, 2017	2	29
August 28, 2017	14	28
January 5, 2018	30	16
Hawaiian Petrel		
July 21, 2017	19	67*

Bat Take Estimate

- Total Estimated Adult Take for FY 2018 = 73 bats
 - 33 unobserved direct take + 7 indirect take

Fiscal Year	Number of Observed Fatalities	Annual Total Take Estimate ²
2013	4	11
2014	9	17
2015	9	14
2016	4	7
2017	2	9
2018	5	15
Total	33	73

² Total take is the sum of the annual direct take estimated from Evidence of Absence estimator (Dalthorp et al. 2017) plus the annual indirect take calculated using USFWS (USFWS 2016) guidance.

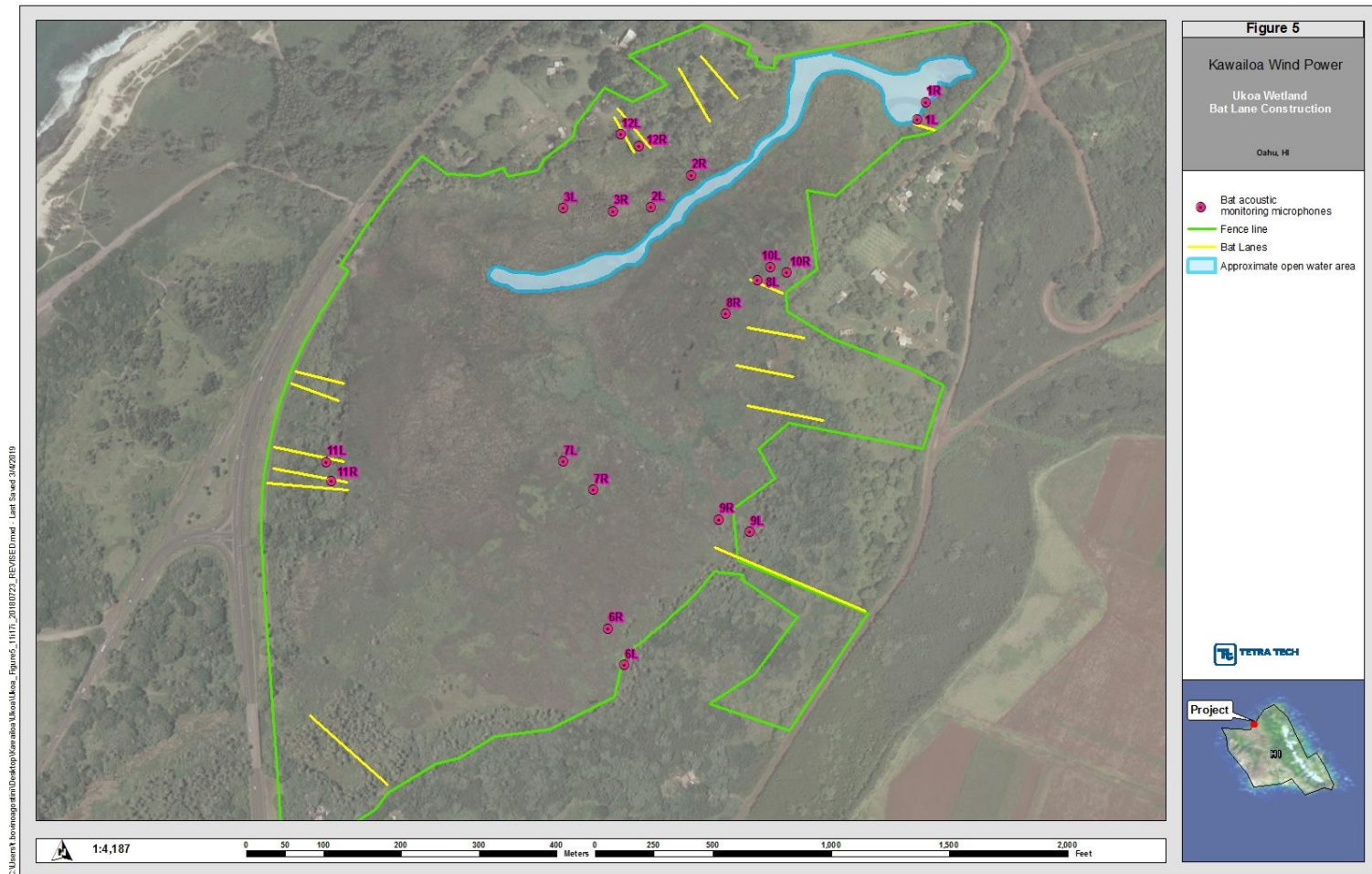
Tier 1 Bat Mitigation: 'Uko'a Wetland

- Clear vegetation from open water
 - January 2017
- Created and maintained 16 bat lanes
 - April 2017; Nov 2017-Dec 2017
- 10 Wildlife Acoustics SM2+BAT detectors (2 microphones)
 - Pre-data: April 2012-October 2015
 - Post-data: June 2017-June 2018



Tier 1 Bat Mitigation: 'Uko'a Wetland

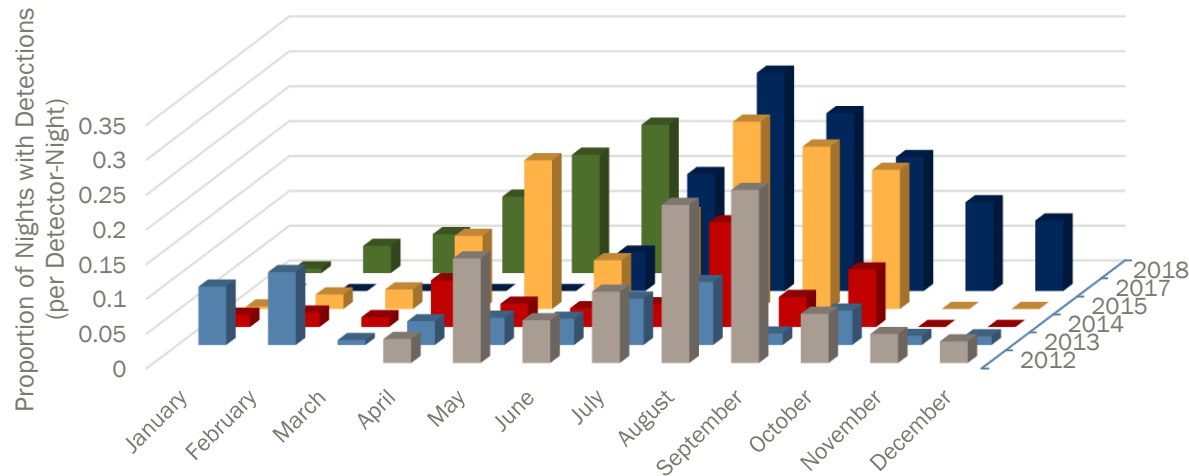
10 detectors re-deployed late June 2017



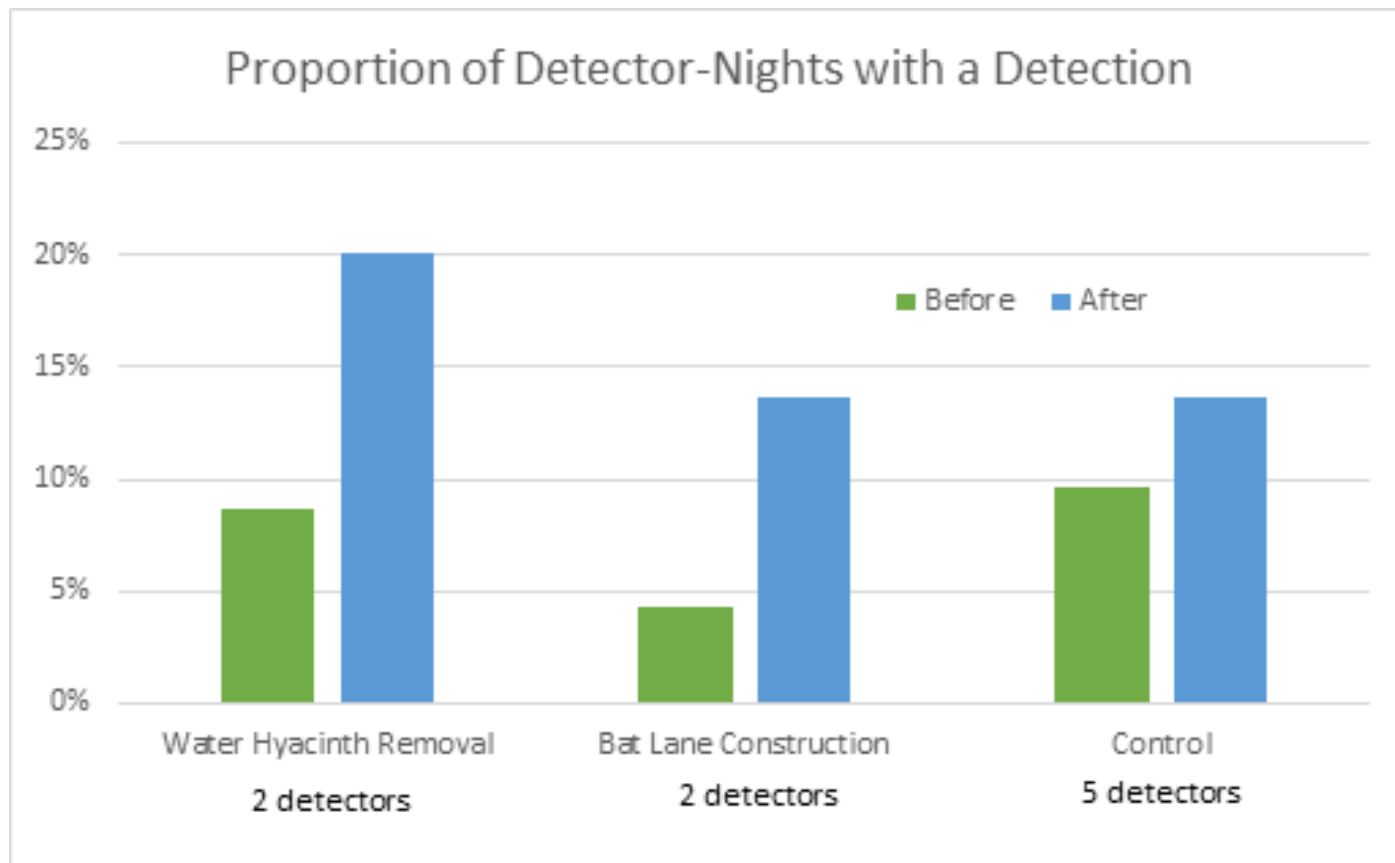
'Uko'a Wetland: Acoustic Data

Dates	No. of Nights Sampled	Proportion of Detector Nights with Detection(s)
2012 (April 2012-Dec 2012)	1381	0.123
2013 (Jan 2013- Dec 2013)	2176	0.045
2014 (Jan 2014-Oct 2014)	2528	0.046
2015 (Jan 2015-Oct 2015)	2550	0.125
2017 (June 2017-Dec 2017)	1801	0.188
2018 (Jan 2018- June 2018)	1743	0.101

Detection Rates at 'Uko'a (2012-2018)



'Uko'a Wetland: Acoustic Data



QUESTIONS?

