

# Coconut Rhinoceros Beetle Brief

Impacts, status, and control in Hawai`i

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Coconut Rhinoceros  
Beetle Response





**Coconut Rhinoceros Beetle Adult: ~2"**

Invasive species that feeds on coconut and other palms, can feed on other tropical plants like hala, sugarcane, kalo, banana. Target of CRB Response.



**Coconut Rhinoceros Beetle Larva: reaches 3.5-4"**

Hatches from eggs and lives in green waste (mulch, compost, rotting plant material).



# Coconut Rhinoceros Beetle Damage:



**Bore holes  
caused by CRB**



**V-shaped cuts  
caused by CRB**



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## PRIMARY FOOD SOURCES IN HAWAI'I:



Coconut palms



Royal palms



Date palms



Fan palms

**CRB are not host-specific;** if their primary food sources are unavailable, they feed on other palms and agriculturally and culturally important plants.

## SECONDARY FOOD SOURCES IN HAWAI'I:



Banana



Sugarcane



Hala



Kalo



Sago palms



Pineapple



Ferns

# CRB Impacts

## Economic

- Reduction of private property values
- Loss of tourism from unhealthy and dying palms; loss of tropical aesthetic.
- Costs for removing and replacing dead palms
- Loss of yield for palms, banana, sugarcane and other hosts.
- Increased costs to producers through implementing mitigation measures

## Cultural

- Loss of medium for cultural practitioners, including weavers, traditional hale, and hula practitioners
- Loss of subsistence crops
- Reduction in quality of life from loss of palms

## Environmental

- Native plants including Loulu are already impacted even in high altitude areas.
- Extinction of rare species
- Decreased biodiversity
- Increased coastal erosion
- Increased use of insecticide treatments resulting in increased pesticide loading into the environment
- Unknown effect to native ecosystems, pollinators, competition to native decomposers



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# 2013

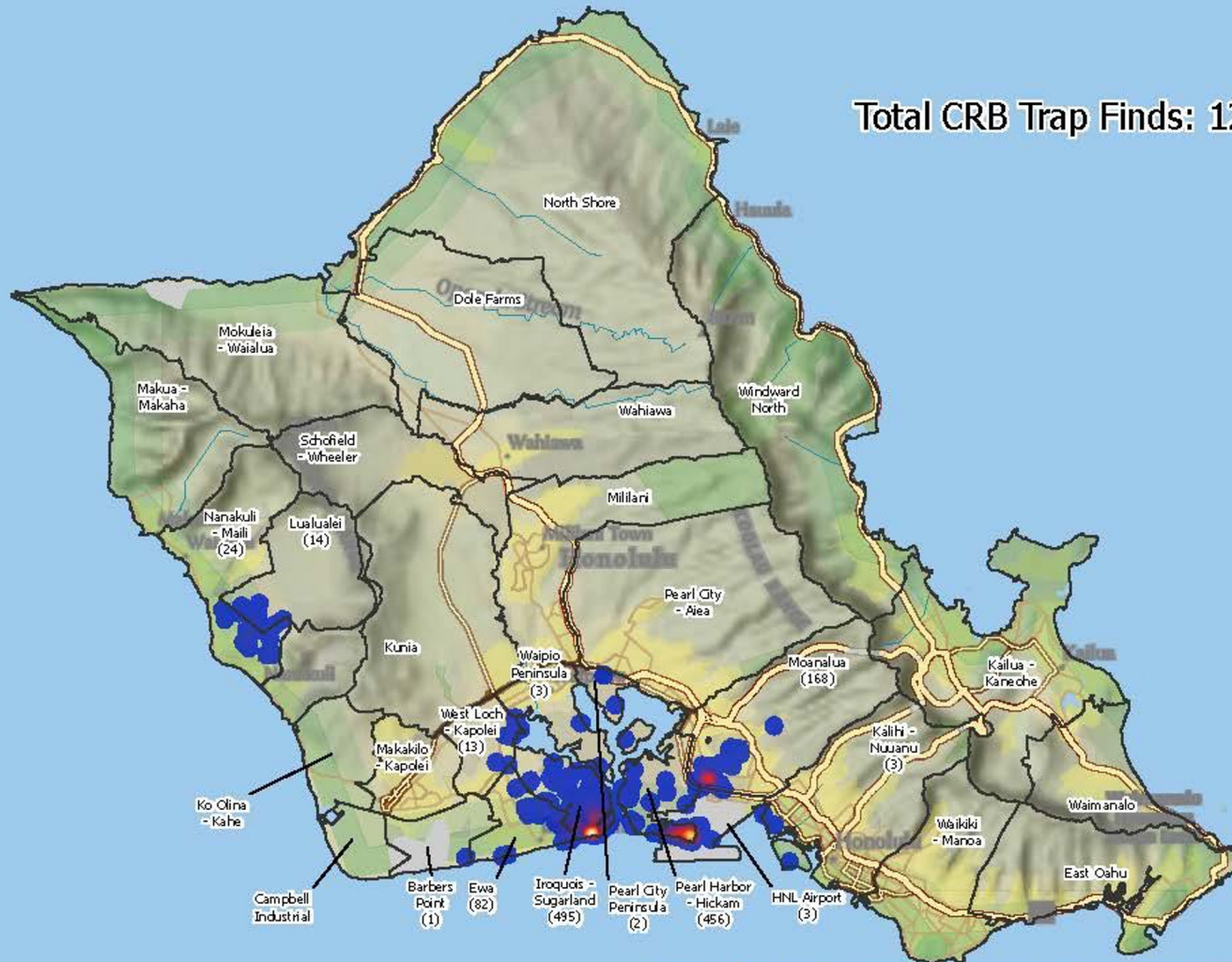
## Dec 23





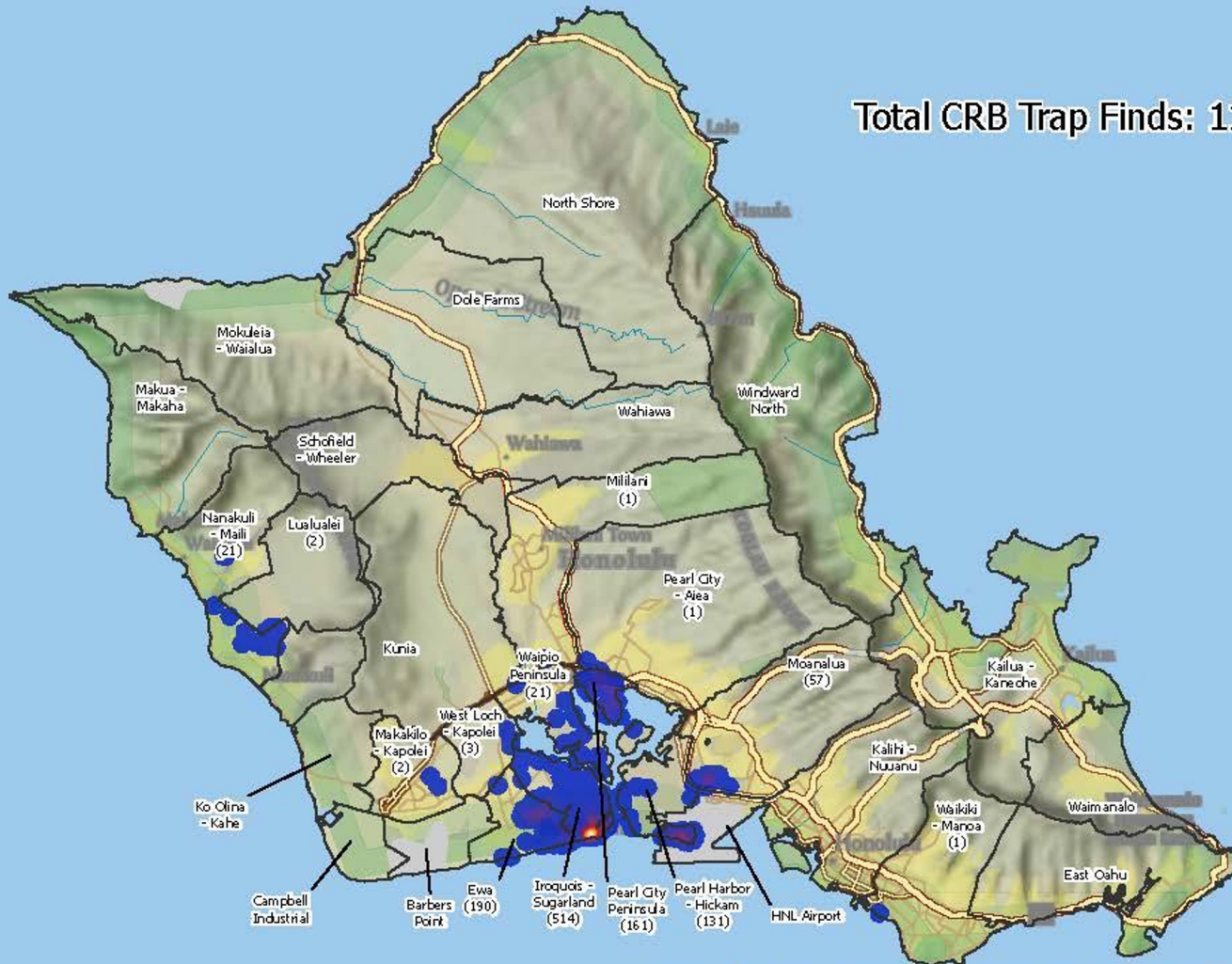
# 2015

Total CRB Trap Finds: 1264



# 2016

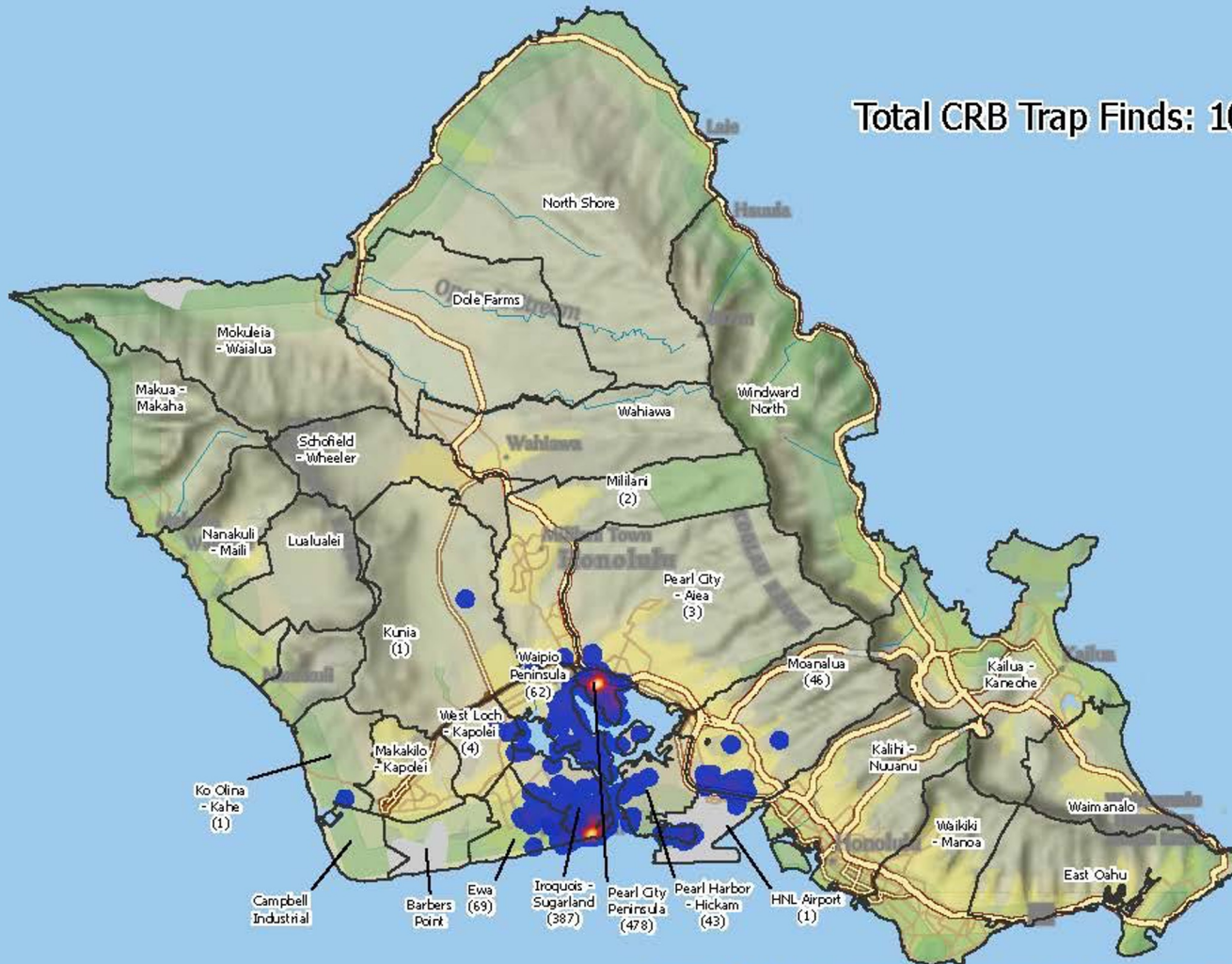
## Total CRB Trap Finds: 1105





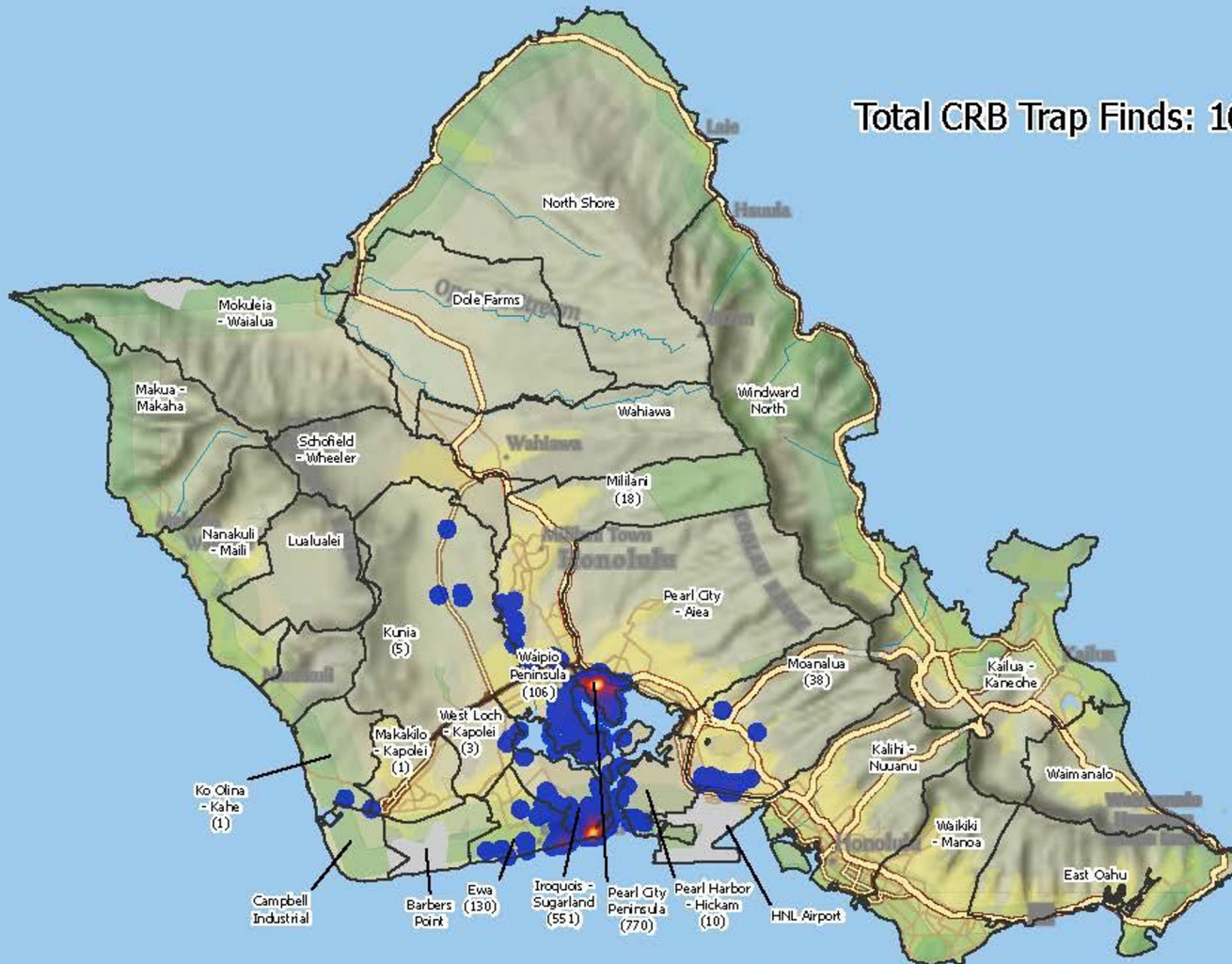
# 2017

Total CRB Trap Finds: 1097



# 2018

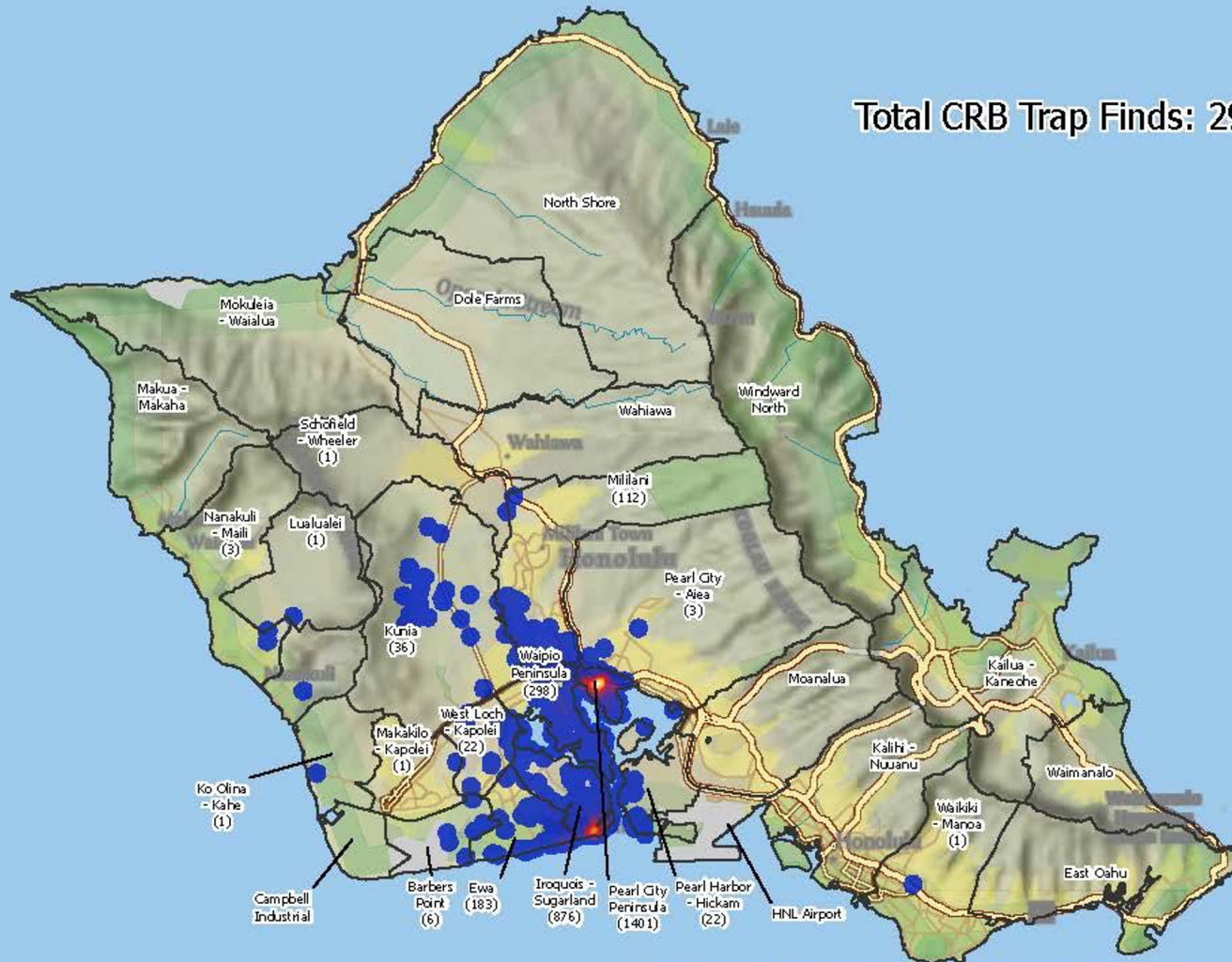
Total CRB Trap Finds: 1633





# 2019

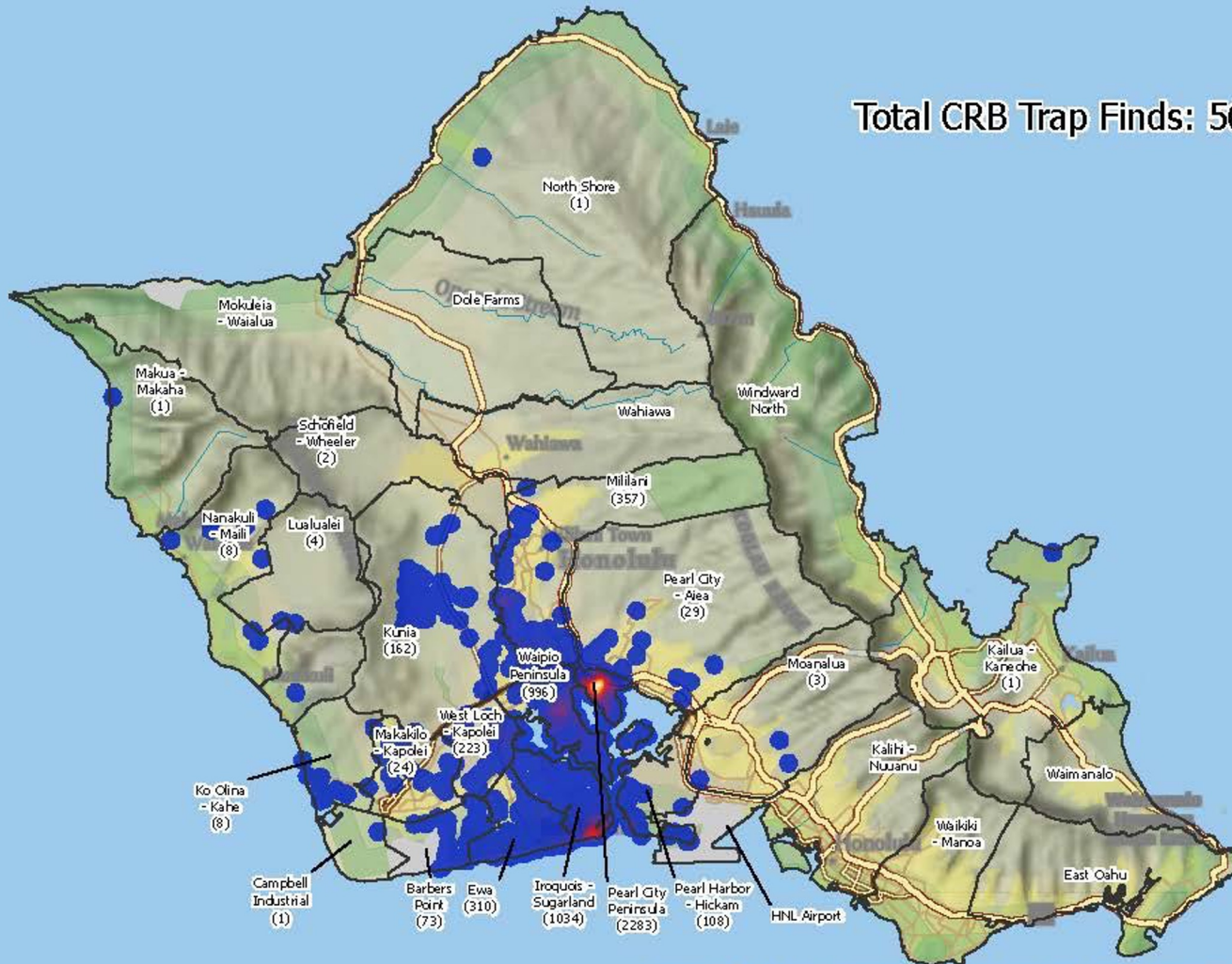
Total CRB Trap Finds: 2967





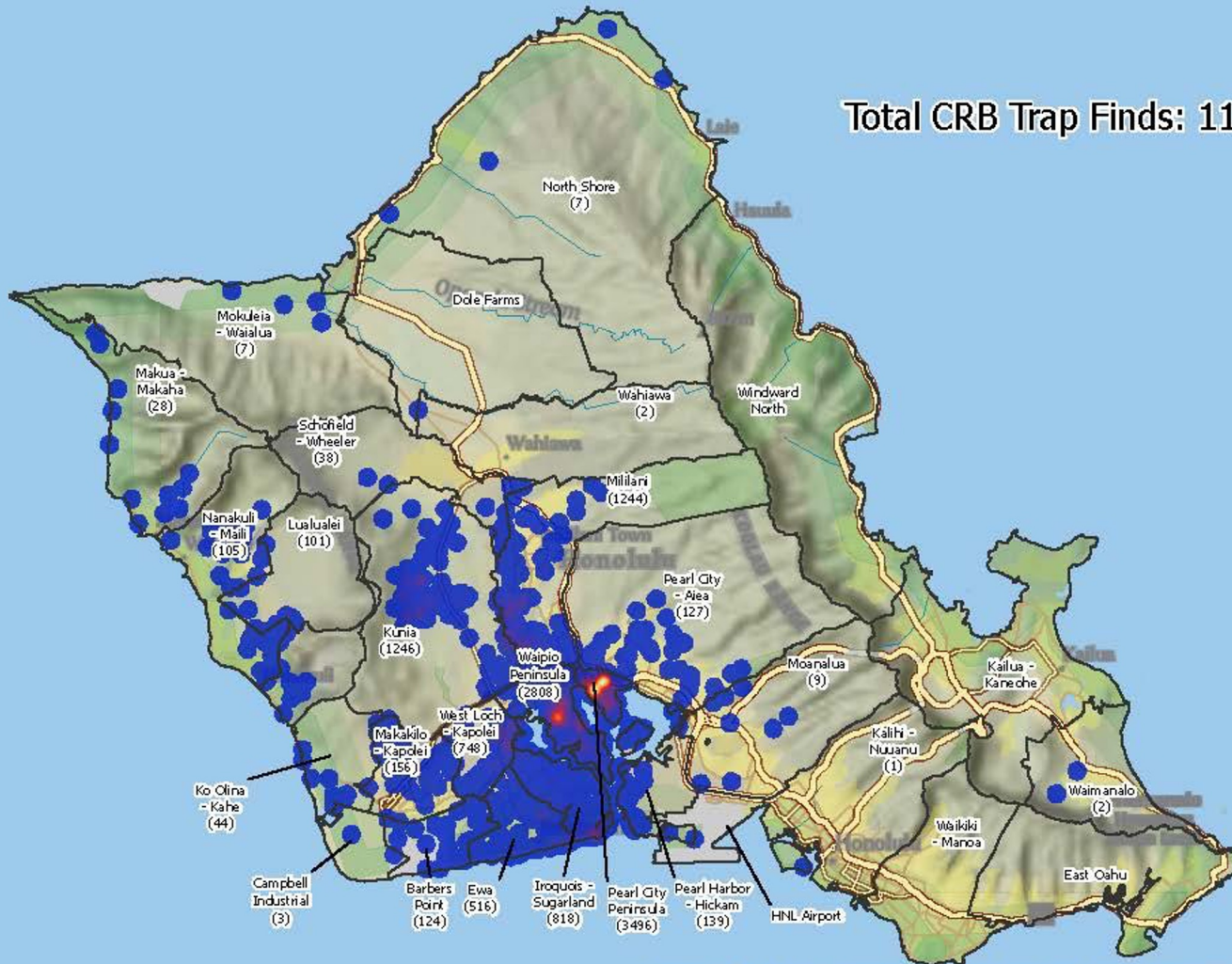
# 2020

## Total CRB Trap Finds: 5627



# 2021

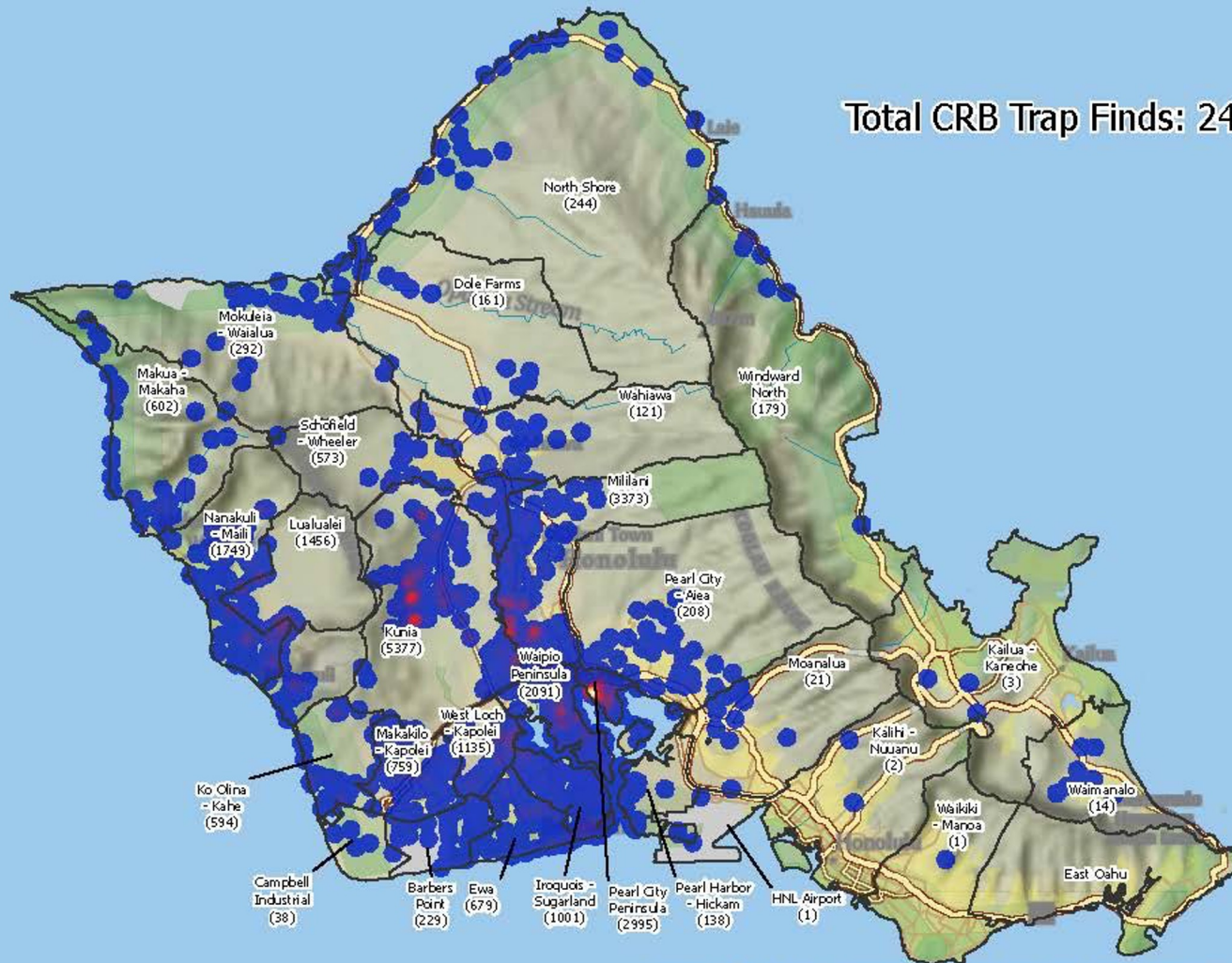
## Total CRB Trap Finds: 11769





# 2022

## Total CRB Trap Finds: 24035





# First detections off Oahu

Kauai  
May 2023

Maui  
October 2023

Big Island  
October 2023



# What actions can be taken?

## Treatments:

Host plants: pesticides and netting.

Breeding sites: Fumigation, heat treatment.

## Containment:

Rules that restrict movement of infested material.

Population suppression.

## Detection:

Trapping, palm surveys, breeding site surveys.



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# What is currently being done?

## Treatments:

### Host plants:

- CRB Response treated >1600 palms (541 last year)
- UH treated 44 palms by drone and HDOA treated 48 by spray from a lift at Wailua GC in 2023.

### Breeding sites:

- CRB Response heat treated or fumigated over 50,000 cu ft of infested or high risk material and removed over 71,000 cu ft to hot composting.
- HDOA Requires businesses to fumigate or heat treat high risk materials before interisland transport.

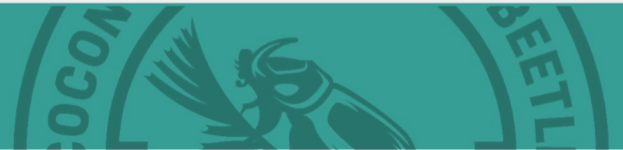




# What is currently being done?

## Containment:

- Interim rules were enacted by HDOA that restrict movement of infested and high risk material from July 2022 until July 2023 and October 2023 until October 2024.
- CRB Response Population suppression through treatments at airports.



# What is currently being done?

## Detection:

- Trapping.
  - CRB Response maintains over 2000 traps primarily on Oahu.
  - Port of Entry Monitoring Program maintains traps at most airports and some harbors
  - ISC's maintain most traps on other islands with significant contributions from HDOA and USDA.
- Palm surveys: CRB Response
- Breeding site surveys:
  - CRB Response surveyed 6039 sites totalling 13 million cu ft over 10 years removing over 13000 larvae.
  - Canine teams survey near ports, regular surveys of compost producers shipping interisland.



# What is currently being done?

## Outreach:

- CRB Response
  - 200-300 public reports per month.
  - Address all CRB calls to 643-PEST from Oahu and many from other islands.
  - presentations to ~200 stakeholders per month statewide.
  - CRB Website and social media accounts.
- ISC's
  - Public reports on each island
  - Presentations
  - Social Media

