



# SITE Guard™ Services

Newport News, VA



# URBAN WARFARE AGAINST THE ZIKA VIRUS IN MIAMI

- AN EYE WITNESS ACCOUNT



Making communities around the world more livable, safe and comfortable.

# THE PROBLEM

- AS OF NOVEMBER 23rd
- FLORIDA ---- 950 CASES WITH 236 LOCALLY ACQUIRED
- ANY PREGNANT WOMEN CAN GET FREE TESTING AT LOCAL LABS
- 168 PEGNANT WOMEN IN FL
- 953 PREGNANT WOMEN WHO TEST POSITIVE IN US
- IN PUERTO RICO 28,111 LOCALLY ACQUIRED CASES

# ZIKA IS UNIQUE

- FIRST TIME IN HISTORY CDC HAS PUT OUT A TRAVEL ADVISORY FOR THE US
- PATIENT DOESN'T GET SICK

THINKING THAT ZIKA MIGHT OVERWHELM  
LOCAL MOSQUITO DISTRICTS DEALING  
WITH AEGYPTI AND ALBOPICTUS CLARKE  
PUT TOGETHER A PLAN TO SUPPLEMENT  
THOSE DISTRICTS.

**CALLED SITE GUARD**

MODELED AFTER RUTGER ATM STUDY HOT SPOT APPROACH TO  
CONTAINER BREEDERS

# Clarke SITE Guard™ Services

*Service Platform: 2-person crews going into residential backyards performing 4 tasks.*

S = Surveillance

I = Inspection

T = Treatment

E = Education

# What is SITE Guard™ Services

- 2 man crew going into the backyard areas and targeting container breeders that vector Zika.
- Designed to be used as a **flexible, supplemental service** to an existing Mosquito Control program.
- Crews inspect property. Eliminate standing water. Larvacide water that cannot be eliminated. Aduticide if there are adults present.
- Protocols in line with international best practices.



# Surveillance

- A risk-assessment **operational map** will be created using key indicators (demographics, ports of entry etc.)
- **BG Sentinel traps** will be set to monitor vector presence (*Aedes aegypti* and *Aedes albopictus*) and assess changes in distribution. This will guide control decisions.

# Inspection

- **Inspect private properties** and other relevant public spaces.
- Technicians will go **door-to-door** within a minimum 1/8 mile radius of a suspected human case.
- **Larval inspection & source reduction:**
  - Record source reduction (empty standing water where possible, turn over items that could hold water) real-time mobile devices record keeping and reporting.
  - Post project inspection report for the community.

# Treatments

## • Adult Control – 2 levels

1. Human case OR local transmission:
  - Property inspections w/in 1/8 mi radius of human case
  - Truck ULV applications with Duet every 2 to 3 days over a 10 day period
  - Aerial adulticide treatments based upon number of cases
2. Travel human cases only or adults found upon inspection:
  - Backyard ULV with Duet adulticide
  - Barrier treatment

## • Larval Control – Inspection based

- Use only **residual** products: Natular Granule & Tablets
- As appropriate for containers or bodies of water that will remain OR hold water with next rain event

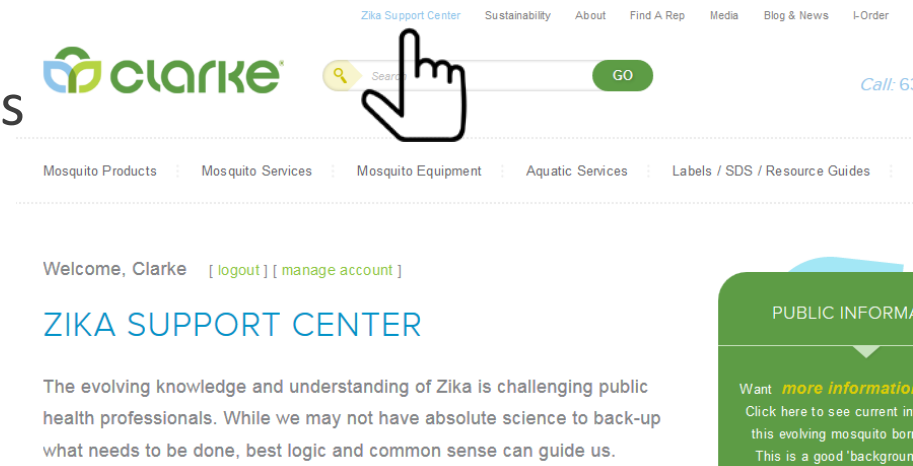
# Education

- **Public Relations assistance**

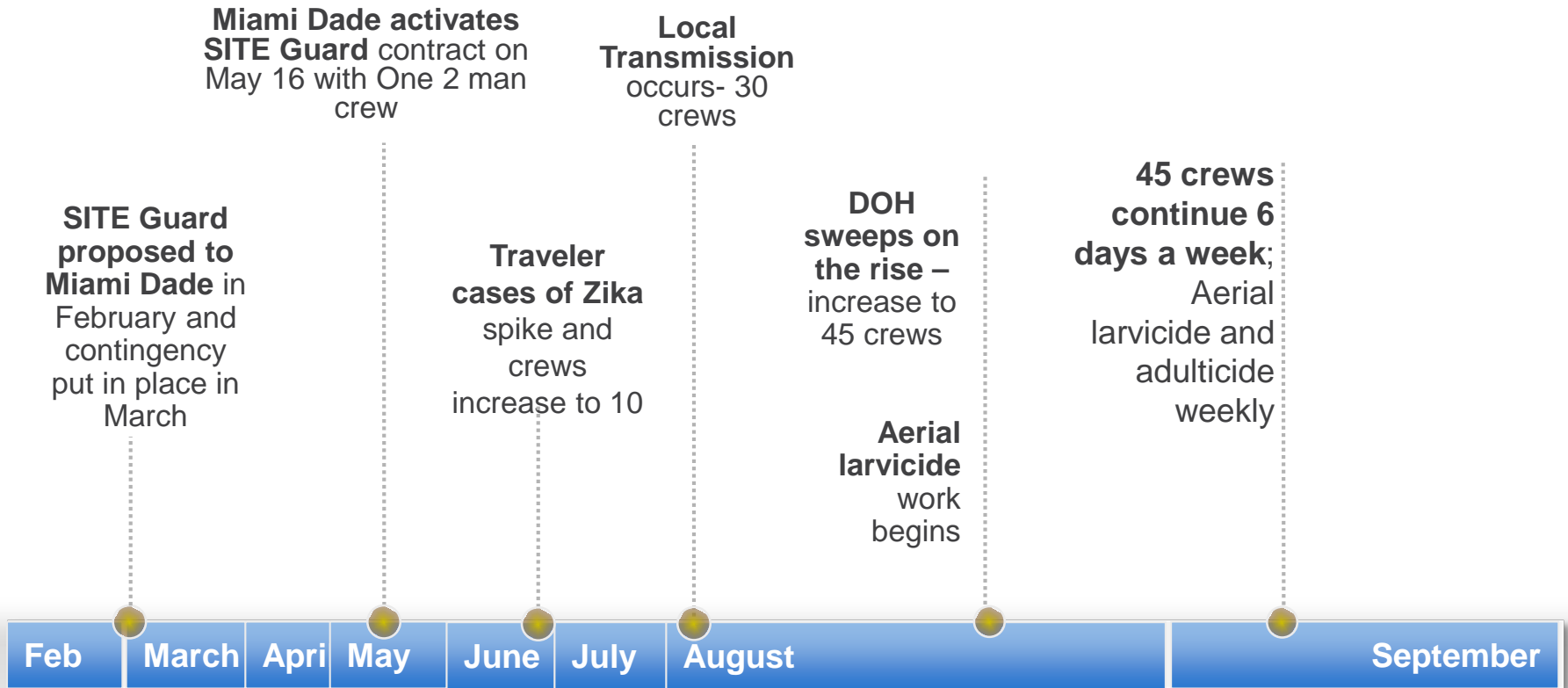
- Professional media training is available to all SITE Guard customers

- **Free communication & educational tools**

- Downloadable/editable news releases, social media posts
- Ready-to-print Zika infographic
- Ready-to-print door hangers & community handout pieces (bi-lingual)
- Interview tips & speaking points
- FAQs



# Miami Dade Evolution



**Hired / trained over 180 employees from inception.**

# Miami-Dade | June 2016

## Clarke SITE Guard™ Services



Six 2 man crews



Making communities around the world more livable, safe and comfortable.

# Miami-Dade | July 2016

## Clarke SITE Guard™ Services



Thirty 2 man crews!



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# Miami-Dade | August 2016

## Clarke SITE Guard™ Services

Forty-five 2-man crews!



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# Miami-Dade | August 2016

## Clarke SITE Guard™ Services



Fleet of 32 vehicles



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# Miami Dade | Hiring Seasonal Staff

- Hired and trained over 180 seasonal employees from inception. (12 to 173 in 42 days)
- Pass drug testing, motor vehicle records check and background check
- Training
  - Classroom OSHA safety
  - Chemical training
  - Public Relations /Resident Interaction Training
  - 1 day classroom training of operation field procedures directly with Field Supervisor
  - Field training working with a veteran technician

# Clarke Human Resources Recruiting

- Screen resumes
- Phone interview
- Personal interview
- **Approx. 60% have degree(s)**
  - Public Health
  - Biology
  - Environmental Science
  - Sustainability
  - Masters of Public Health

# Treatments

## • Adult Control – 2 levels

### 1. Human case OR local transmission:

- Property inspections w/in 1/8 mi radius of human case
- Truck ULV applications with Duet every 2 to 3 days over a 10 day period
- Aerial adulticide treatments with Dibrom based upon number of cases

### 2. Backyard ULV with Duet adulticide

- Barrier treatment

## • Larval Control – Inspection based

- Use only **residual** products: Natular Granule & Tablets
- As appropriate for containers or bodies of water that will remain OR hold water with next rain even
- Aerial larvacide with Vectobac WDG

# Product & equipment containment, and important safety step



# Miami-Dade | What We Have Done

## Personnel: Professional Appearance

- ID Badges



- Standard Uniform

- Clarke grey shirt
- Dark blue pants
- Dark blue hat
- Miami-Dade Contractor Vest

- Truck wrapped to identify as Miami-Dade Contractor





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In September I had the opportunity to join our SITE GUARD teams in Miami Dade to do house to house inspections for suppression of the Zika Virus.

Hola, mi nombre es Wally.  
Soy de Miami Dade control  
del mosquito



Please note: I was  
not on vacation in  
Miami

It's very hot in Miami



# PROTOCOL

- KNOCK ON DOOR WITH BROCHURE IN HAND
- STAND BACK
- IDENTIFY YOURSELF AS ZIKA RESPONSE TEAM AND ASK IF WE CAN HAVE ACCESS TO BACKYARD
- 95% SPOKE SPANISH
- 50% SPOKE NO ENGLISH
- 43% WERE HOME 90% OF THOSE GAVE US ACCESS



# The challenge: Cryptic breeding sites



# Cryptic Breeding Sites



Unexpected breeding sites



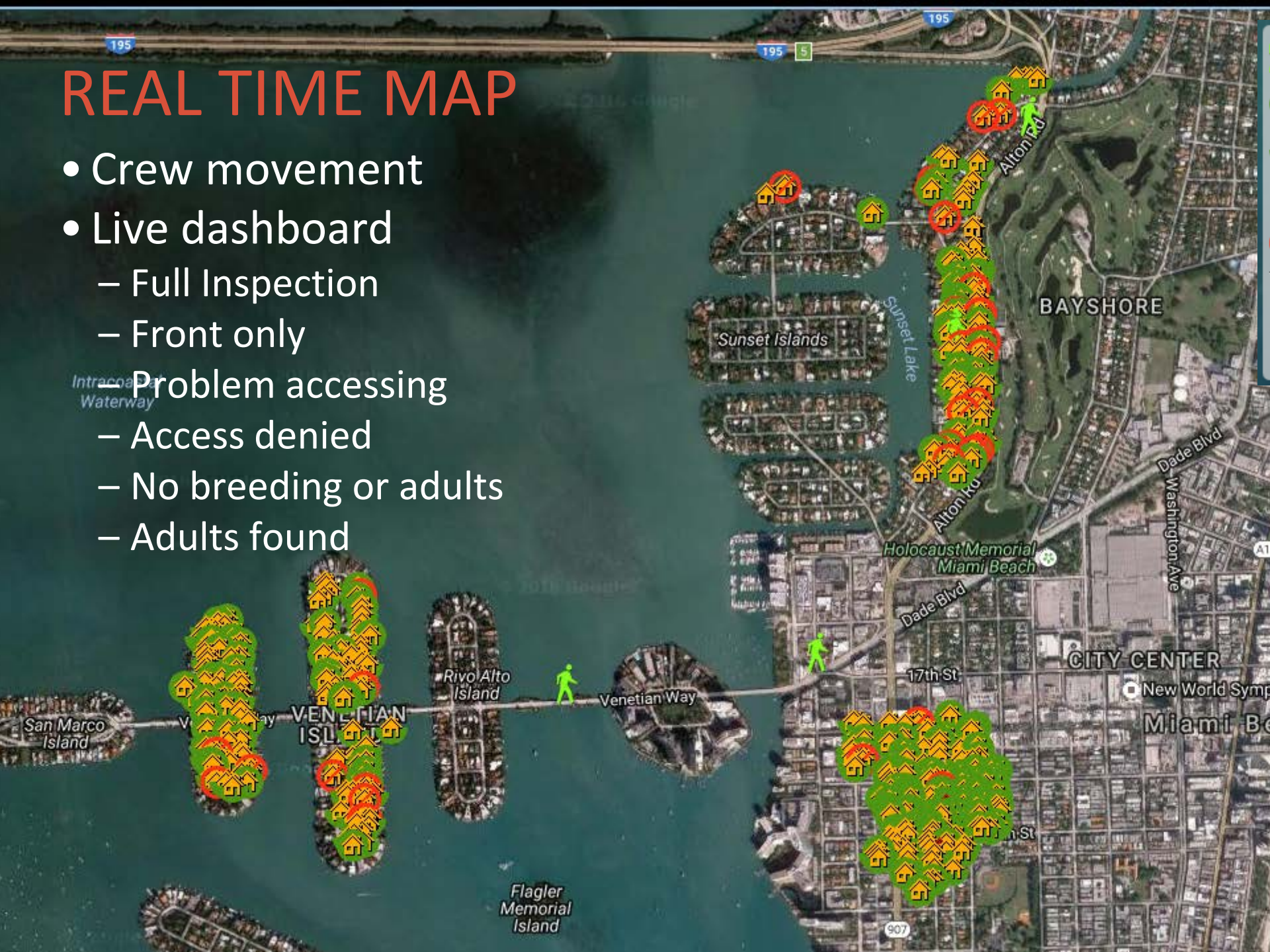
Garbage Receptacles

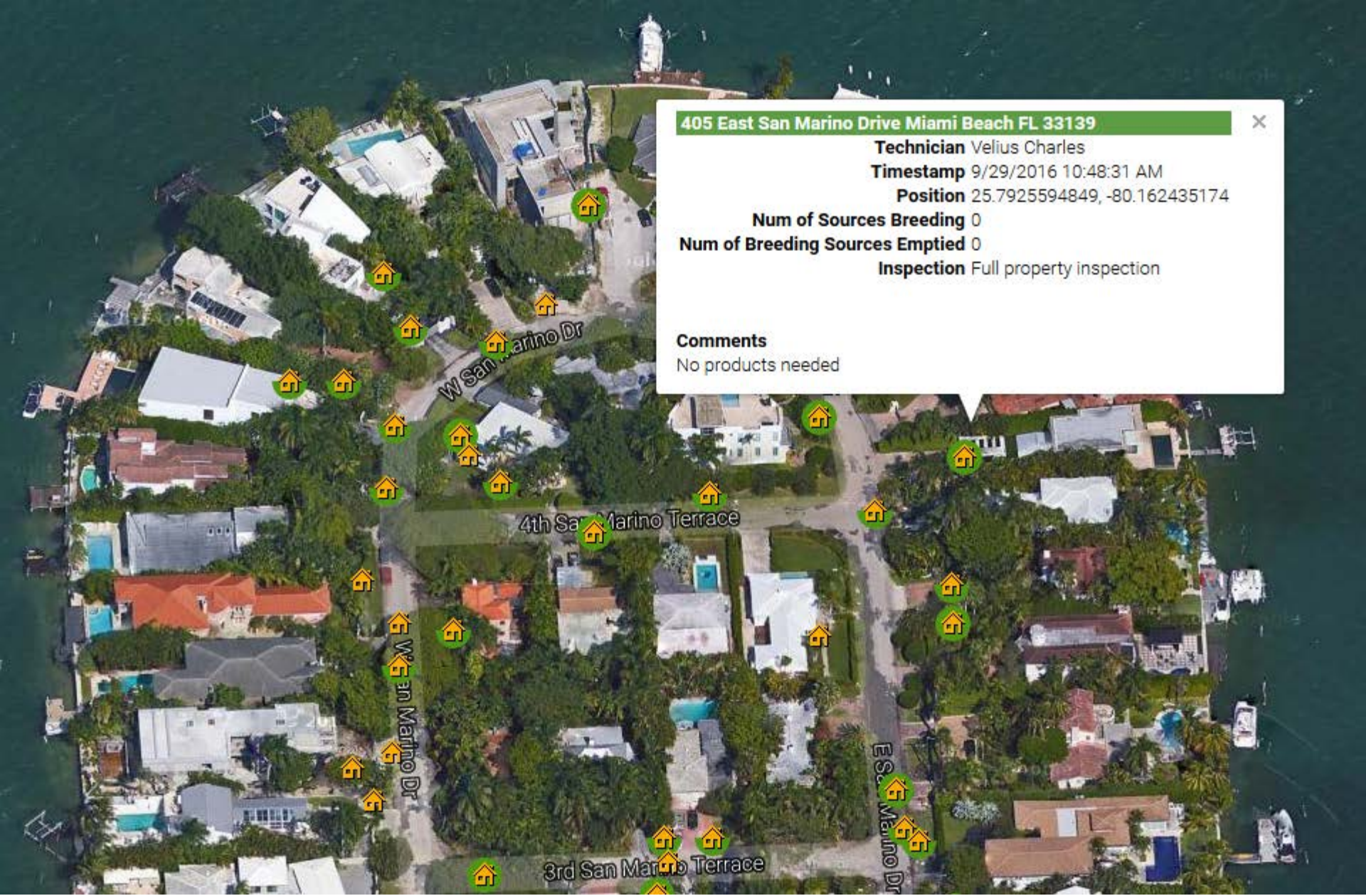
# EVIL BROMELIADS



# REAL TIME MAP

- Crew movement
- Live dashboard
  - Full Inspection
  - Front only
  - Problem accessing
  - Access denied
  - No breeding or adults
  - Adults found





405 East San Marino Drive Miami Beach FL 33139

**Technician** Velius Charles

**Timestamp** 9/29/2016 10:48:31 AM

**Position** 25.7925594849, -80.162435174

**Num of Sources Breeding** 0

**Num of Breeding Sources Emptied** 0

**Inspection** Full property inspection

**Comments**

No products needed

# Miami-Dade | Data Collection and Reporting

Powered By Prius

Property Name: Miami-Dade (M20007)

This is a message from Clarke. Below are the total number of locations by technician for 08/16/2016:

Total Locations Inspected	Total Number Of Containers Emptied	Total No Locations Breeding	Total No Buckets Breeding	% Location Breeding
964	257	122	143	12.66

- Modification of **Clarke Prius Software** to accommodate improved reporting capabilities for Miami-Dade.
- We provide detailed documentation for DACS reports
- We provide detailed documentation so county can get reimbursed

# Surveillance

- A risk-assessment **operational map** will be created using key indicators (demographics, ports of entry etc.)
- **BG Sentinel traps** will be set to monitor vector presence (*Aedes aegypti* and *Aedes albopictus*) and assess changes in distribution. This will guide control decisions.
- CDC gave us permission to use In2Care Mosquito Traps (150)



# In2Care Traps



# Miami-Dade | What We Have Done

## Clarke SITE Guard™ Services



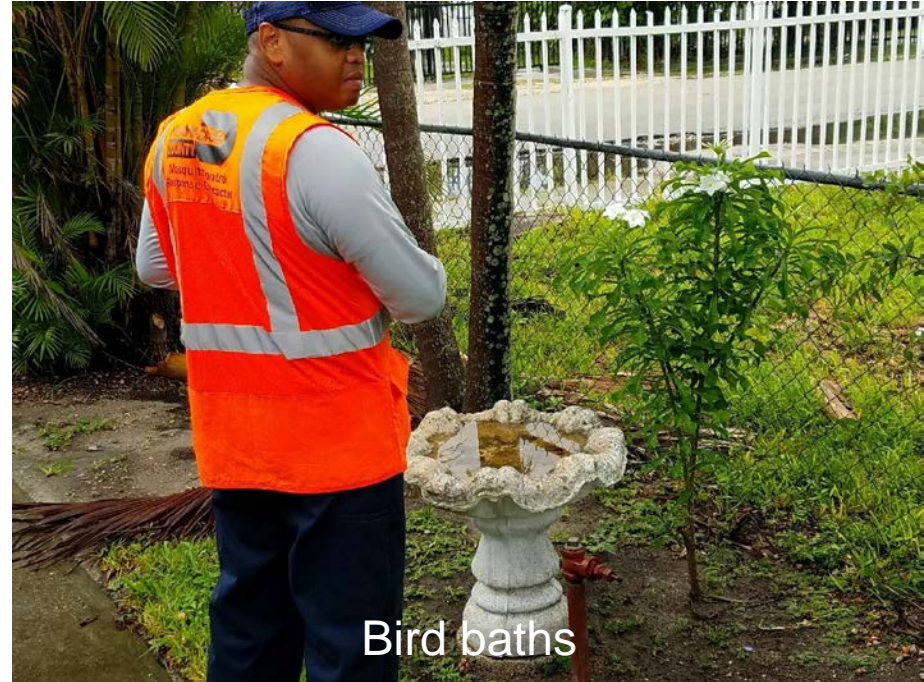
Natular G30 Granules



Natular T30 Tablet



Pots



Bird baths



Standing water from downspout



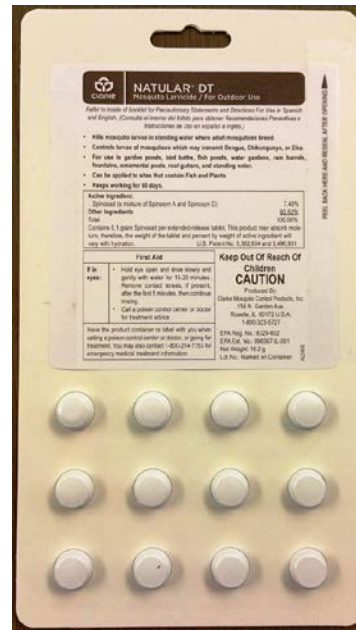
Bromeliads other succulents

ZKit™



# ZKit™ Community Involvement Program

Natular® DT Larvicide Tablet  
12-Count Blister Card +  
Distribution Support Tools



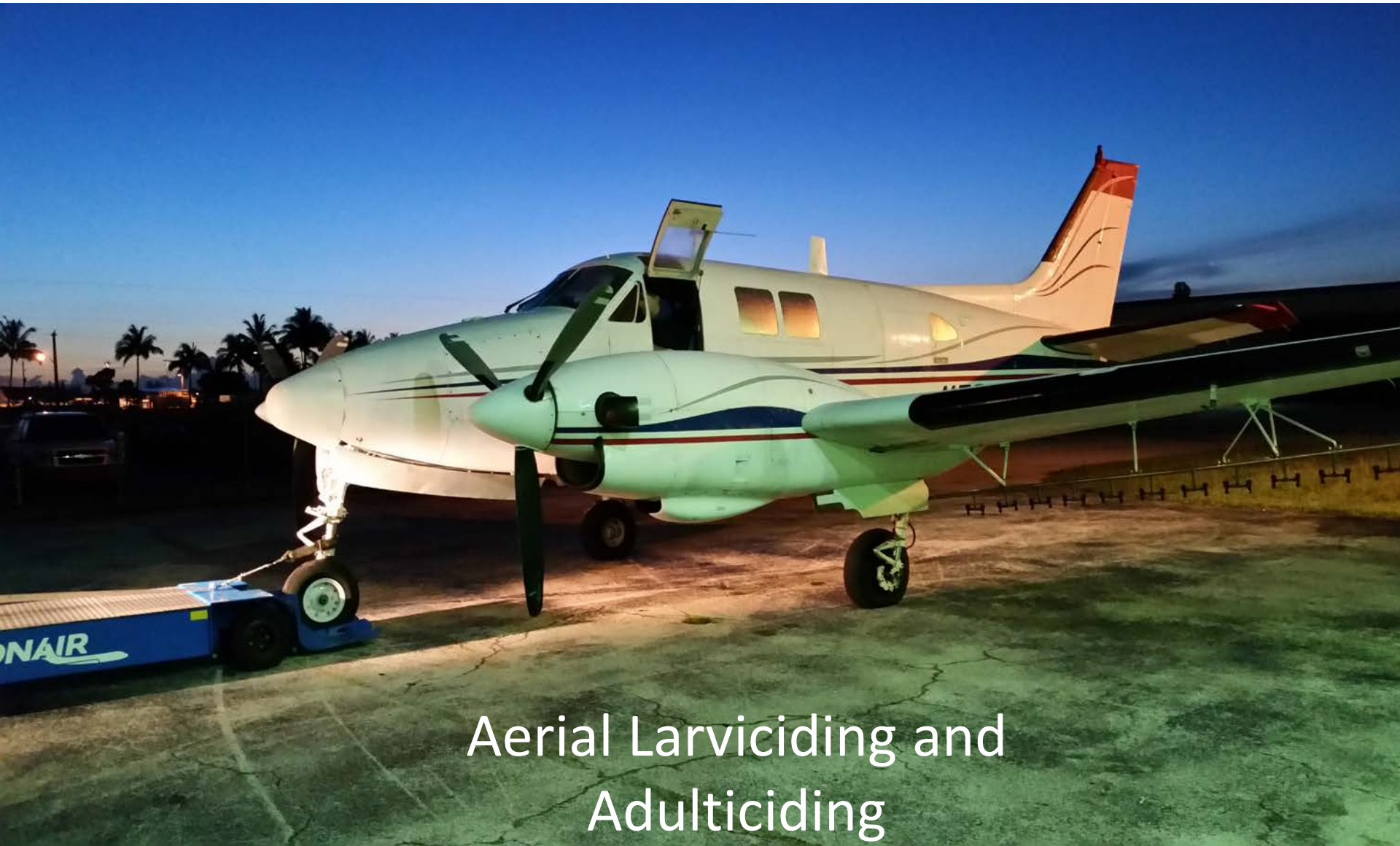
9" x 5 3/4"  
50 cards / case  
600 tablets / case



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# Applications

# Miami-Dade | Clarke Aerial Services



Aerial Larviciding and  
Adulticiding



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# Miami-Dade | Clarke Aerial Services

## Liquid Larvicide Application



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# Protest over aerial spraying



# BUFFALO TURBINE LARVACIDE

- USED VECTOBAC WDG
- VERTICLE HEIGHT 100 FT
- 100 MICRON DROPLET SIZE (AVERAGE)
- 400 FT SWATH

# Liquid Larvicide ULV Application





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# MIAMI ZIKA

- AS OF LAST WEEK WE STILL HAVE 43 CREWS
- MOST LIKELY WILL GO TO MIDDLE OF DECEMBER
- TEXAS HAS 1<sup>ST</sup> LOCAL TRANSMISSION
- NEXT YEAR IS ???????



Thank You

