

ZAPPING ZIKA: It Takes a Village



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Florida Keys District Summary

- Operating Budget: \$11M
- 65 Full Time Staff
 - 37 Inspectors (field, domestic, offshore)
- 6 Aircraft (2 airplanes, 4 helicopters)



One Community, Three Mosquito Operations



Urbanized Key West (*Aedes aegypti*)



Large Mangrove Sites (*Aedes taeniorhynchus*)

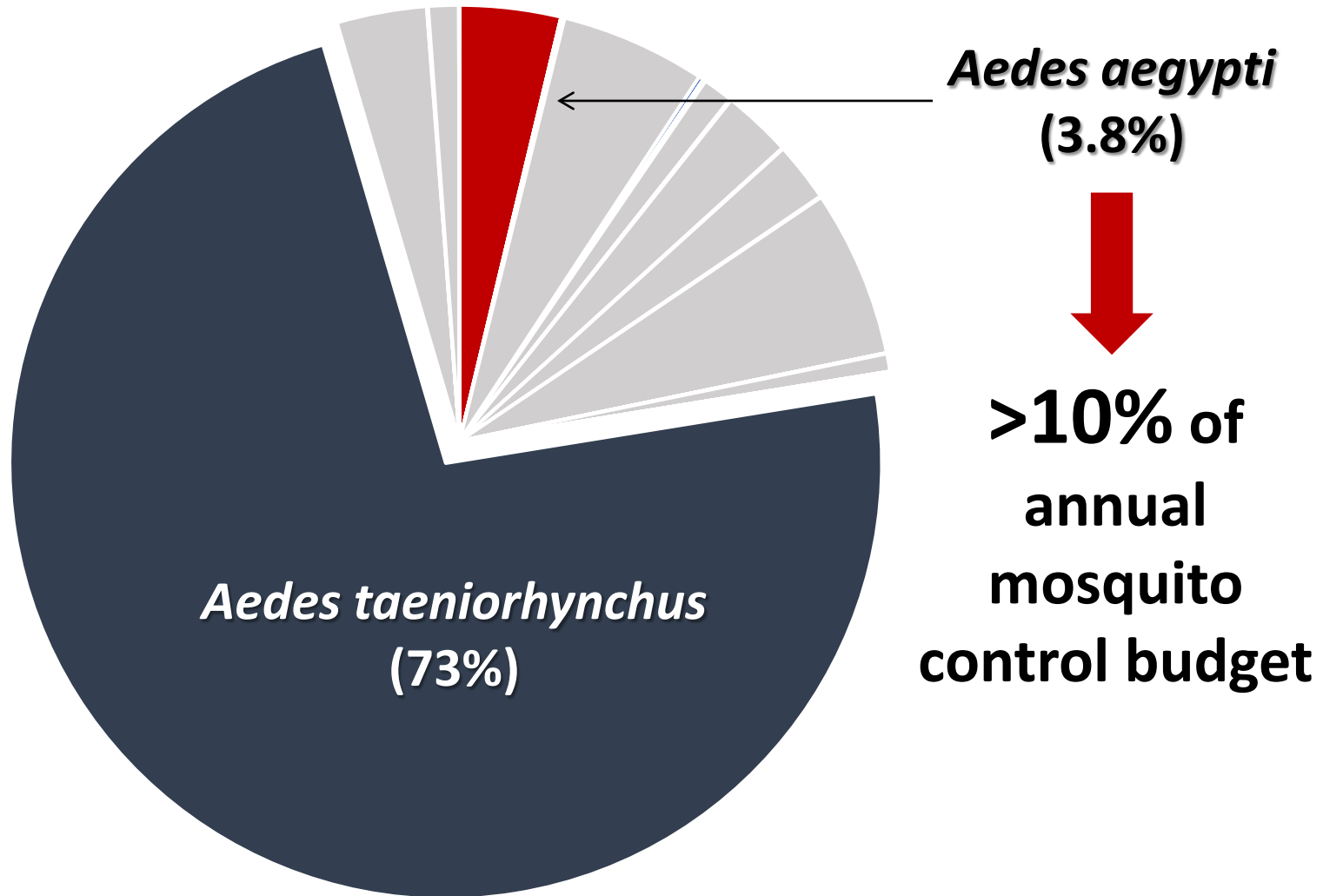


Lower, Middle, and Upper Keys Neighborhoods
(combination)



Mosquitoes of the Florida Keys

(Total females collected, 2015; n = 665,842 mosquitoes)



Enter Zika in 2016...where were we?

- Key West Inspectors: 10 → 8
- Operational aerial *Bti* applications
- Outside of Key West:
 - Identified areas of high importance
 - Inspections more frequent
 - Prioritized *Ae. aegypti* over salt marsh response



Asks from DOH for funding

- More Boots on the Ground
 - Hired 2 full time and 2 seasonal inspectors for the Key West area
- Additional surveillance resources (BG traps)
- Treatment Equipment and Materials
 - Handheld
 - Barrier
 - Aerial *Bti* applications
- Truck
 - Aerial adulticide applications



Mosquito Control Operations

- Action dependent upon findings
 - High adult numbers
 - Handheld, truck, aerial adulticiding
 - High rainfall (1.5")
 - Aerial Vectobac WDG (*Bti*)
- Aerial *Bti* applications
 - Average: 15 missions/year



Community Partnership

- Mosquito Control/Health Department Communication
 - Notified of all suspect case locations
 - Respond immediately to potential risk areas
- Once Public Health Emergency was declared:
 - Instituted the Emergency Management System
 - Held weekly meetings with Community Partners
 - Multiple Municipalities
 - Stakeholders
 - Operational Updates
 - Health Department Updates



Door Hanging Events



Feeling the sting of
mosquitoes?
Then it's time to
drain and cover.

DRAIN

Drain standing water.

Drain water from garbage cans, house gutters, pool covers, coolers, toys, flower pots or any other containers where sprinkler or rain water has collected.

DISCARD:

old tires, drums, bottles, cans, pots and pans, broken appliances and other items that aren't being used.

EMPTY AND CLEAN:

birdbaths and pets' water bowls at least once or twice a week.

PROTECT:

boats and vehicles from rain with tarps that don't accumulate water.

MAINTAIN:

the water balance (pool chemistry) of swimming pools. Empty plastic swimming pools when not in use.

Stop mosquitoes from living and multiplying around your home or business.



Protect yourself
from mosquito
bites and the
diseases they
carry.

Don't forget to
drain and cover.

COVER



COVER YOUR SKIN WITH:

CLOTHING if you must be outside when mosquitoes are active, cover up. Wear shoes, socks, long pants, and long sleeves.

REPELLENT Apply mosquito repellent to bare skin and clothing. Always use repellents according to the label. Repellents with DEET, picaridin, oil of lemon eucalyptus, and IR3535 are effective. Use mosquito netting to protect children younger than 2 months.

**COVER DOORS AND WINDOWS
WITH SCREENS.**

Keep mosquitoes out of your house.
Repair broken screens on windows,
doors, porches, and patios.

Monroe County Health Department
305-293-7500

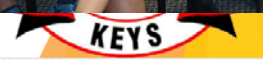




7:30am to noon

Sign up by visiting
www.tinyurl.com/volunte

Contact:
 5607
 @flhealth.gov



Zika Task Force



The
Florida Keys
& Key West
... come as you are®
MONROE COUNTY TOURIST DEVELOPMENT COUNCIL



UF | IFAS
UNIVERSITY of FLORIDA



Zap Zika Campaign/Website



Join the Fight... Don't Let Bugs Bite



The Florida Keys has no confirmed cases of locally acquired Zika. Together, we can keep it that way.

Please join the Monroe County ZapZika campaign. We are seeking everyone's support to help the Florida Keys Mosquito Control and the Florida Department of Health in Monroe County. These two agencies have been on the front line for months proactively working to keep the mosquito-borne virus that can cause birth defects out of the Island chain.

Their work has paid off so far. But now is not the time for complacency, as evidenced by nine travel-related Zika cases confirmed in the Keys in 2016. There have been no new cases since November. Florida Keys Mosquito Control was notified when they were just suspected cases. Its workers took extra measures where the cases occurred to eliminate the *Aedes aegypti* mosquito that can carry the virus and keep these isolated cases.

ZAPZika is supported by the Monroe County Board of County Commissioners, the Monroe County Extension Service, the City of Key West, the Village of Islamorada and the Monroe County Tourist Development Council. Here's what you can do:

DON'T LET THEM BREED: DUMP AND DRAIN



DON'T LET THEM BITE: COVER AND SPRAY



Pregnancy Registry

PREGNANT & CONCERNED ABOUT Zika?

- Zika virus can be passed from a mother to her fetus. Infection during pregnancy can cause certain birth defects including microcephaly, a malformation of the brain.
- Zika can be spread through sex and by the bite of an infected *Aedes aegypti* mosquito; a species commonly found in Monroe County.
- There is no vaccine or cure for Zika.

The best way to prevent Zika is to prevent mosquito bites.

The Florida Keys Mosquito Control District and the Florida Keys Healthy Start Coalition are joining together to help protect pregnant women in Monroe County by creating a Monroe County Pregnancy Registry.

FKMCD will use the information in this confidential and voluntary registry to increase mosquito control efforts in registered women's areas should a Zika case occur nearby.

The identity of people in the registry will be kept private and secured. This is a voluntary registry, physicians will not be adding individuals to the registry.

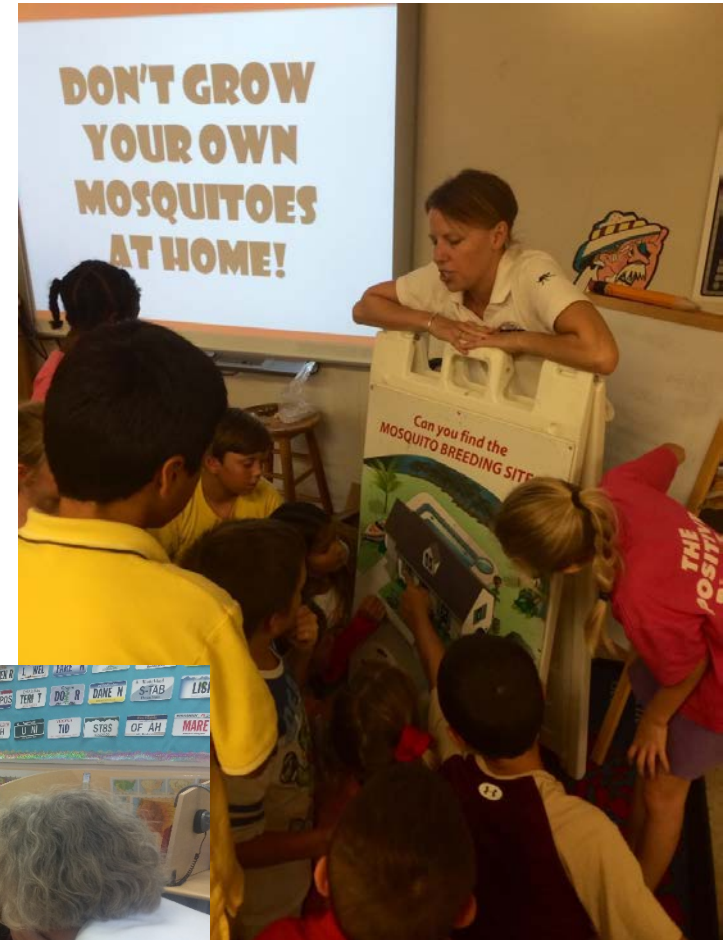
To be added to the registry, please contact:



Florida Keys Mosquito Control:
Catherine Pruszynski
305.292.7190 x 160
cpruz@keysmosquito.org



School Programs and Joint Presentations





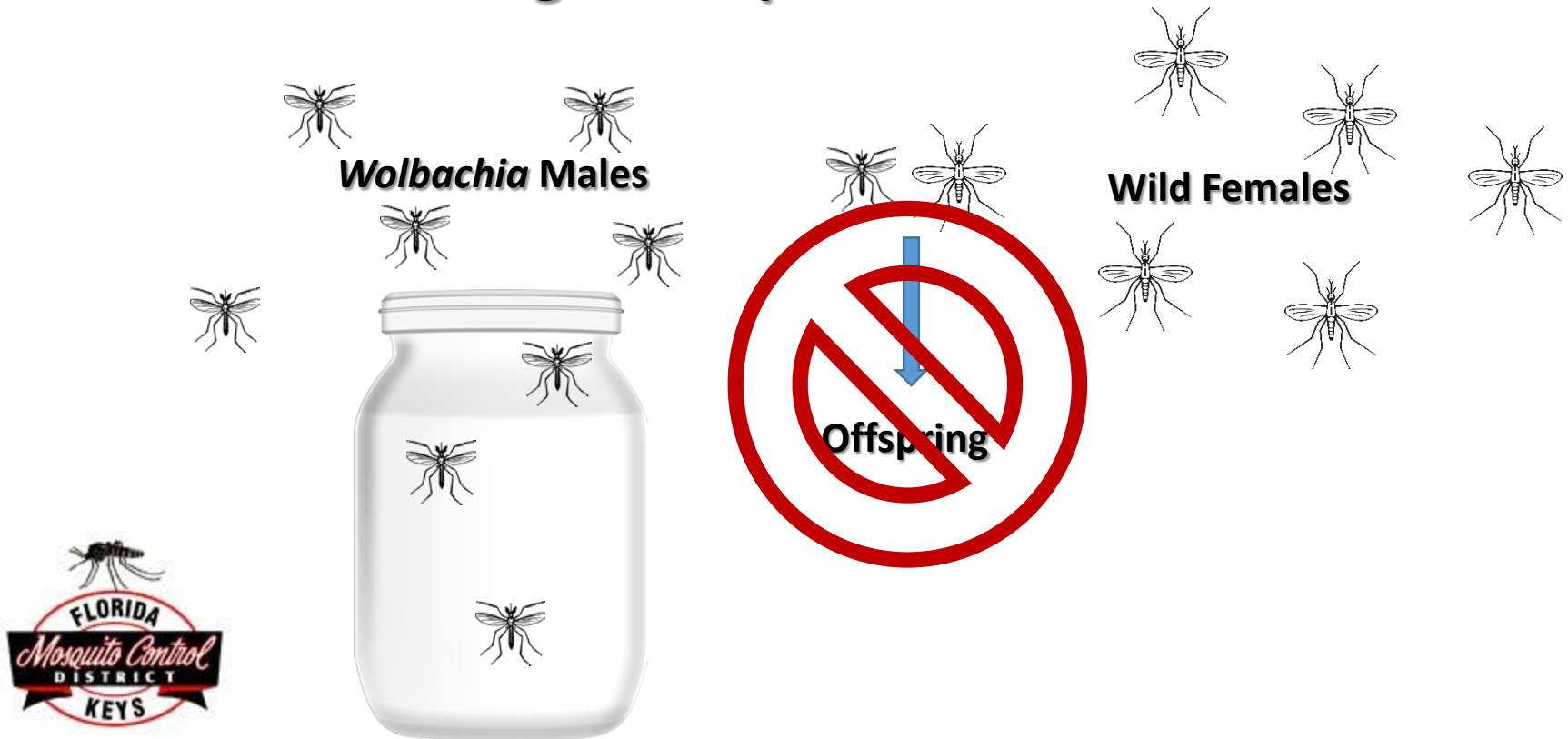
New Technologies

- ***Wolbachia*-infected Male Mosquito Releases**
 - **Currently Ongoing**
- **GM Male Mosquito Releases**
 - **Awaiting Regulatory Approval**



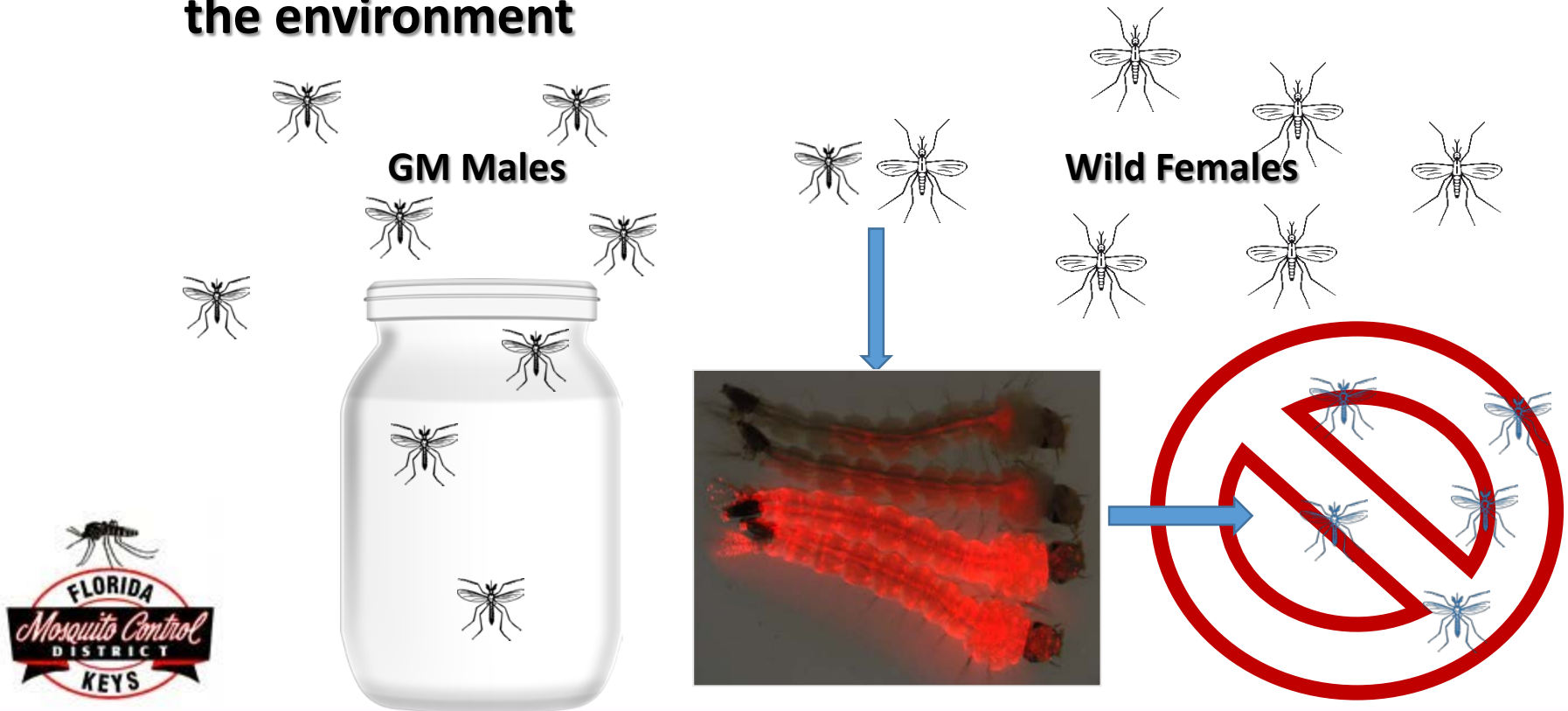
Wolbachia* infected *Ae. aegypti

- Florida Keys added to Experimental Use Permit
- Releases to began in April 2017



GM Mosquito Release Trial

- FDA approved small field trial in Key Haven: Aug '16
 - No significant impact to human health, animal health or the environment



Non-Binding Referendum Results

- *Are you in favor of the Florida Keys Mosquito Control District Conducting an effectiveness trial in Monroe County, FLORIDA, using genetically modified mosquito to suppress an invasive mosquito that carries mosquito-borne diseases?*
- Overall: 58% yes, 42% no
- Key Haven Specifically: 35% yes, 65% no



Next Steps for GM Trial

- Oxitec has asked the FDA for site change
- Selection of alternate sites
 - Precinct supportive
 - Somewhat isolated
 - *Ae. aegypti* population
 - Similar control and release areas



Acknowledgments

- Beth Ranson, FKMCD
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- Monroe County Tourism Development Council
- Monroe County, Florida
- City of Key West
- Marathon High School
- United States Navy, NAS Key West
- FL Keys Healthy Start Coalition

Questions?