

# Zika Virus Outbreak Response in Florida

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# Zika Virus

- Over 800,000 reported cases in the Americas
- Over 37,000 cases in U.S. territories
- Differences from past experiences
  - Sexual transmission
  - Link to birth defects
  - High rates of asymptomatic cases
  - Mosquito control traditionally focused on endemic arboviruses

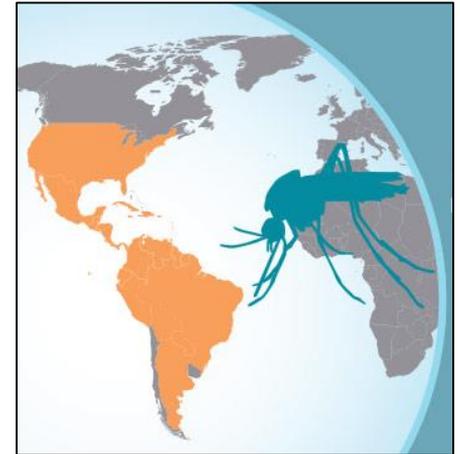


Image courtesy of CDC

# Zika Virus

- Similarities from past experiences
  - Key partnership with local mosquito control districts
  - Interagency Arbovirus Task Force
  - Dengue and chikungunya
  - Targeted educational campaigns



# Florida Timeline

- 2015: Testing capacity at Tampa and Jacksonville public health labs
- January 2016: CDC Health Alert and Florida guidance distributed statewide
- Press releases for first travel-related cases
- February: Public health emergency declared
- July: Testing capacity at Miami public health lab
- Locally acquired cases first identified
- August: Free testing for pregnant women

# Declaration of Public Health Emergency

- DOH designated as lead state agency to coordinate emergency response activities among various state agencies and local governments
- Directs meetings be convened in the impacted counties to discuss mosquito control best practices and outreach to communities with high risk or vulnerable populations
- County Health Officers for affected counties develop outreach program for local medical professionals to increase awareness and access to diagnostic tools

# Roles and Responsibilities

- Florida Department of Health
  - Coordination of human disease outbreak investigation
- Florida Department of Agriculture and Consumer Services
  - Regulate pesticide use for mosquito control
  - Provide routine funding, training and technical expertise to mosquito control districts
  - Mosquito testing
- Local Mosquito Control Districts
  - Zika virus vector control
- Local County Governments
  - Zika virus vector control (may oversee mosquito control districts, clean-up efforts)

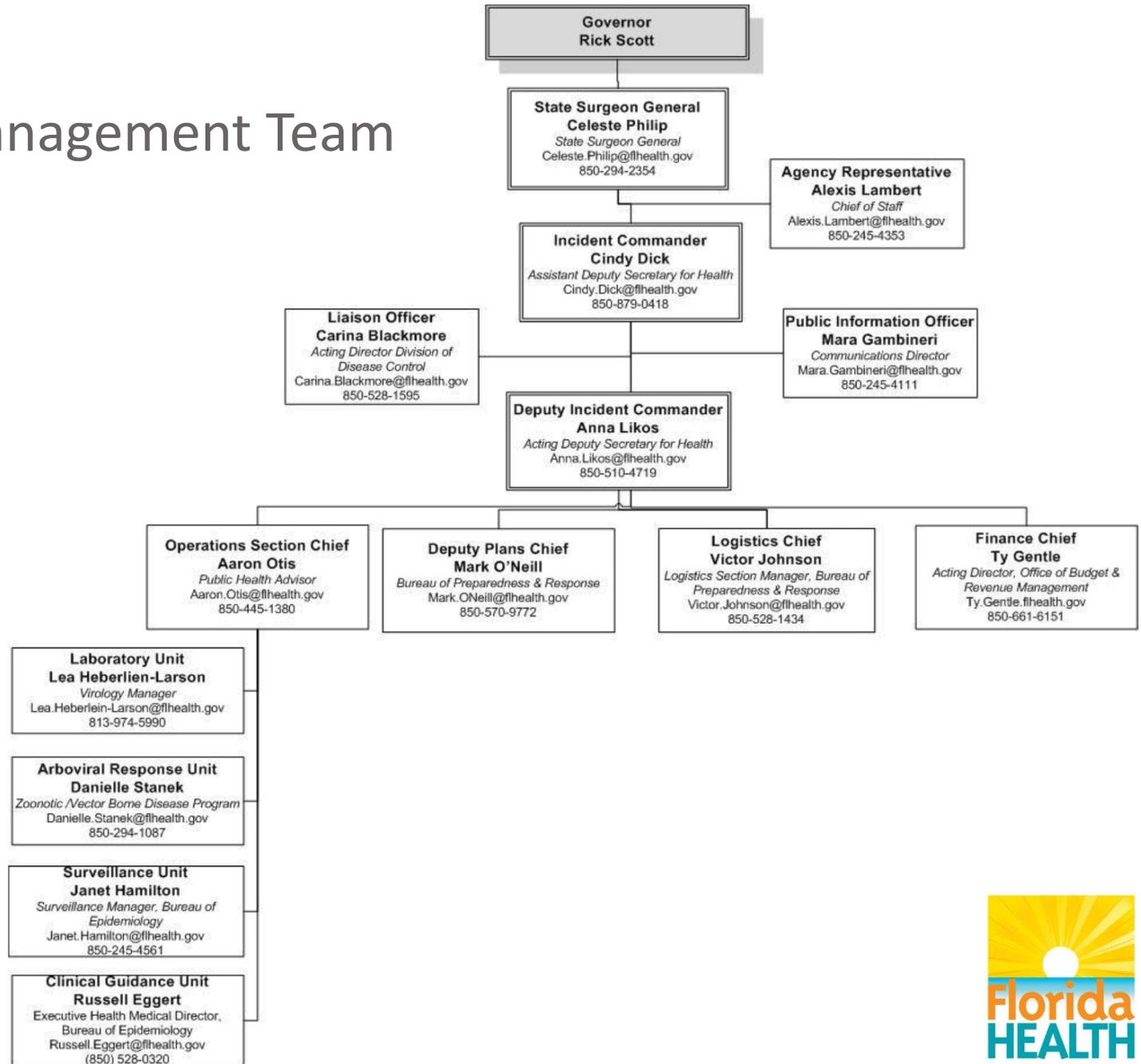
# Incident Objectives

- Prevent or stop local transmission
- Rapidly detect local transmission
- Implement effective crisis and risk communications
- Provide health care providers with current reporting, testing, and management guidance

# Incident Objectives, cont.

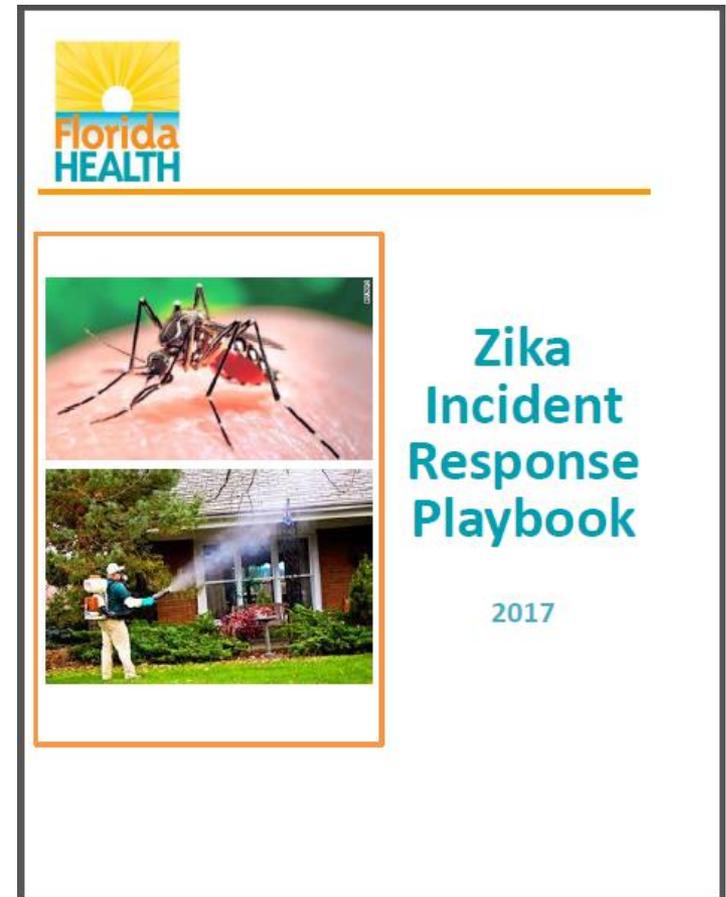
- Empower Floridians to take proactive steps to minimize risk of Zika infection
- Support vector control activities per state guidelines
- Support pregnant women with evidence of Zika infection and children with congenital Zika syndrome

# Incident Management Team



# Zika Preparation

- Zika Playbook
- Meetings with partners (mosquito control, county health departments, other state agencies, health care providers, blood banks, community leaders, etc.)
- Coordinated communication with the public and between partners
- Zika hotline and scripts (Florida Poison Information Center Network)
- Plan for rapid surge capacity
- Adequate supplies in advance, including Zika kits



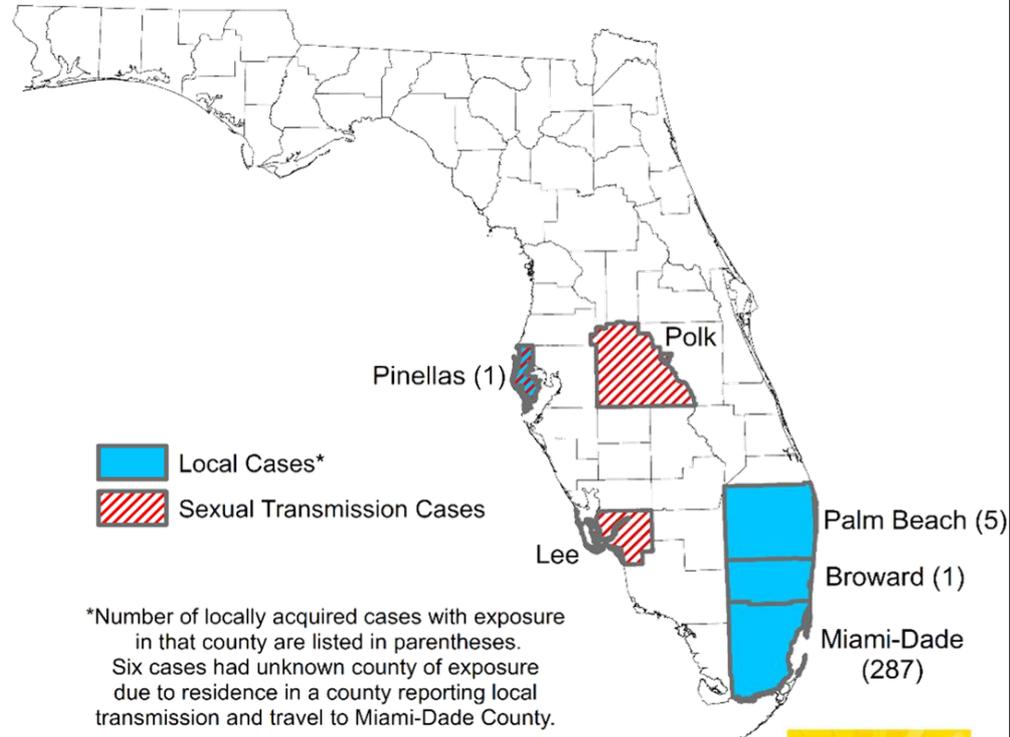
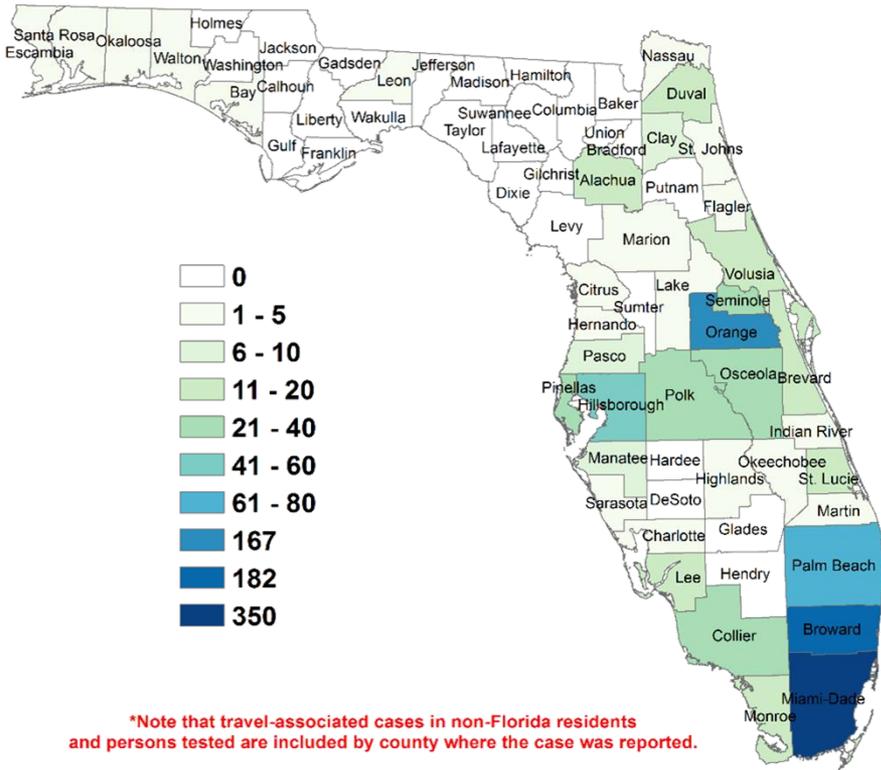
# Local Zika Response

- Public and partner notification
- Zika kit distribution using same logistical system as for medical countermeasures
- Enhanced surveillance and testing (urosurveys, pop-up testing clinics, commercial and CDC lab support)
- Mosquito control response in coordination with epi information

# Zika Cases, 2016

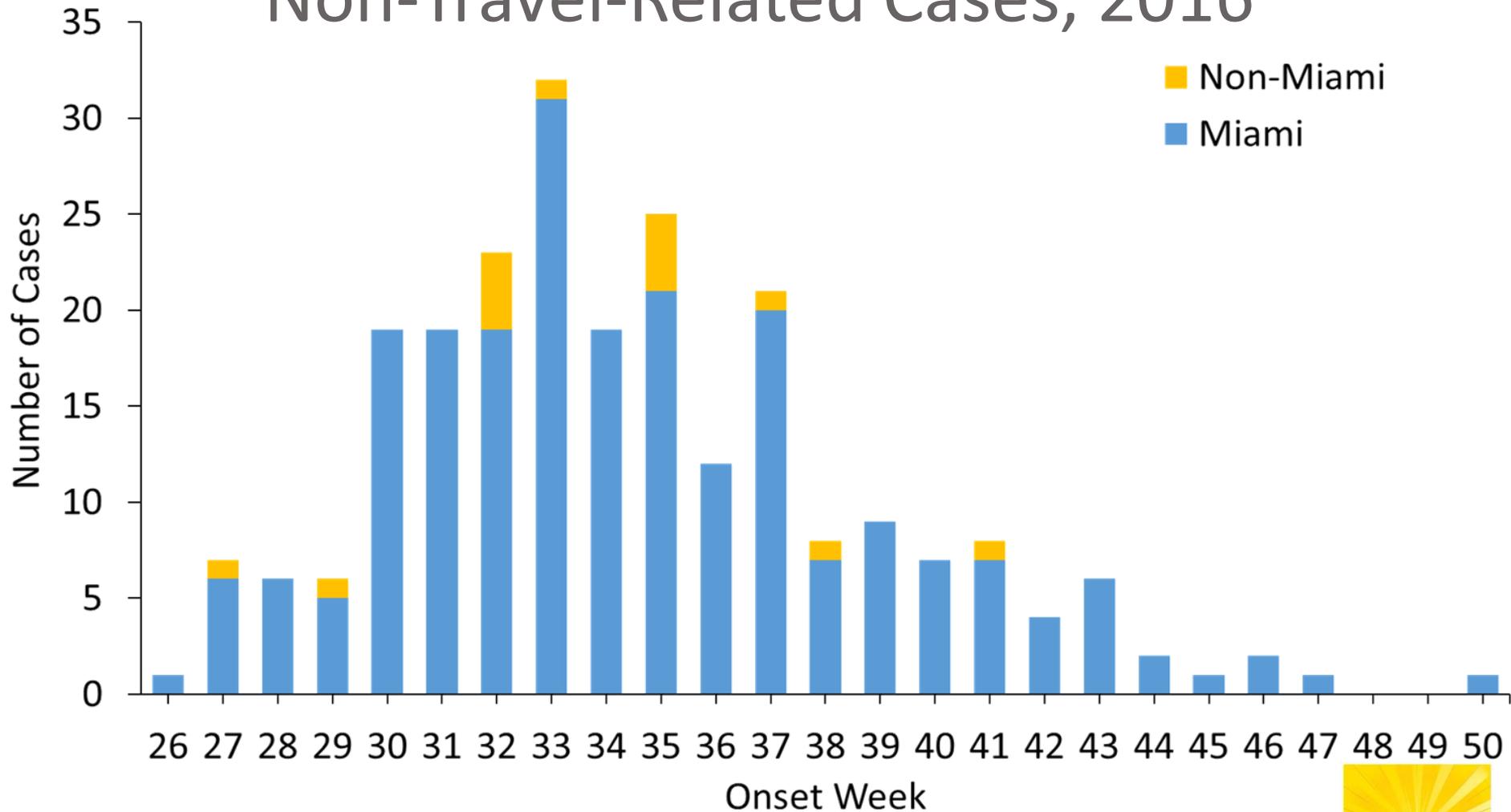
## Travel-related

## Locally Acquired

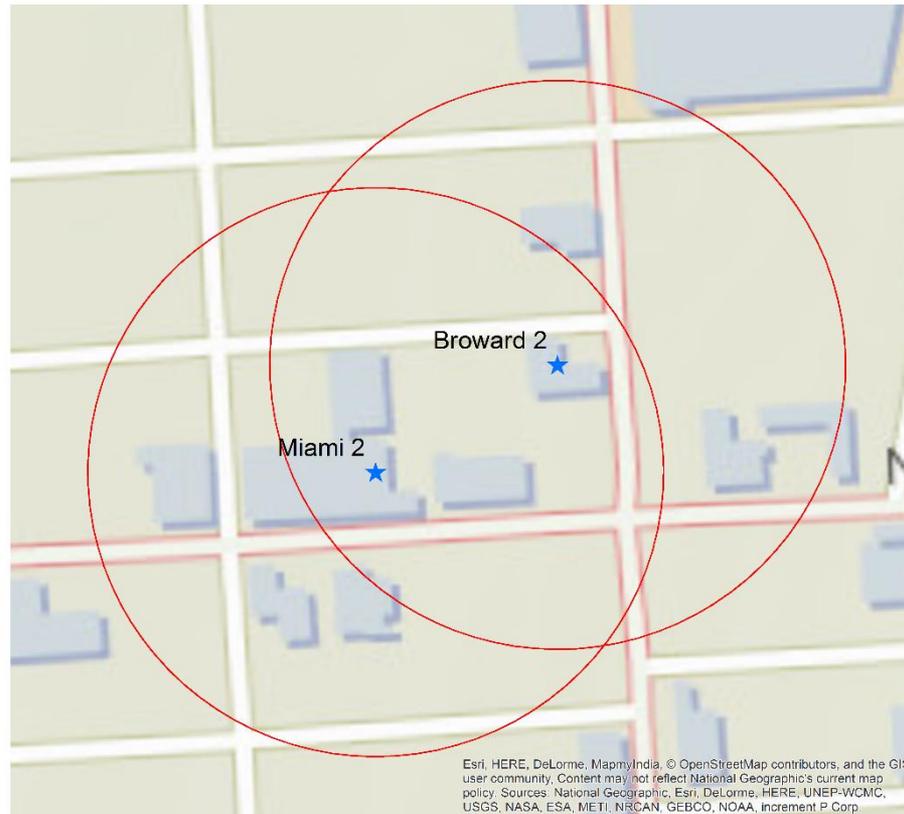


49 undetermined cases

# Symptom Onset Dates for Non-Travel-Related Cases, 2016



# Identification of First Local Outbreak



0 25 50 100 150 Meters



## Location

★ Work

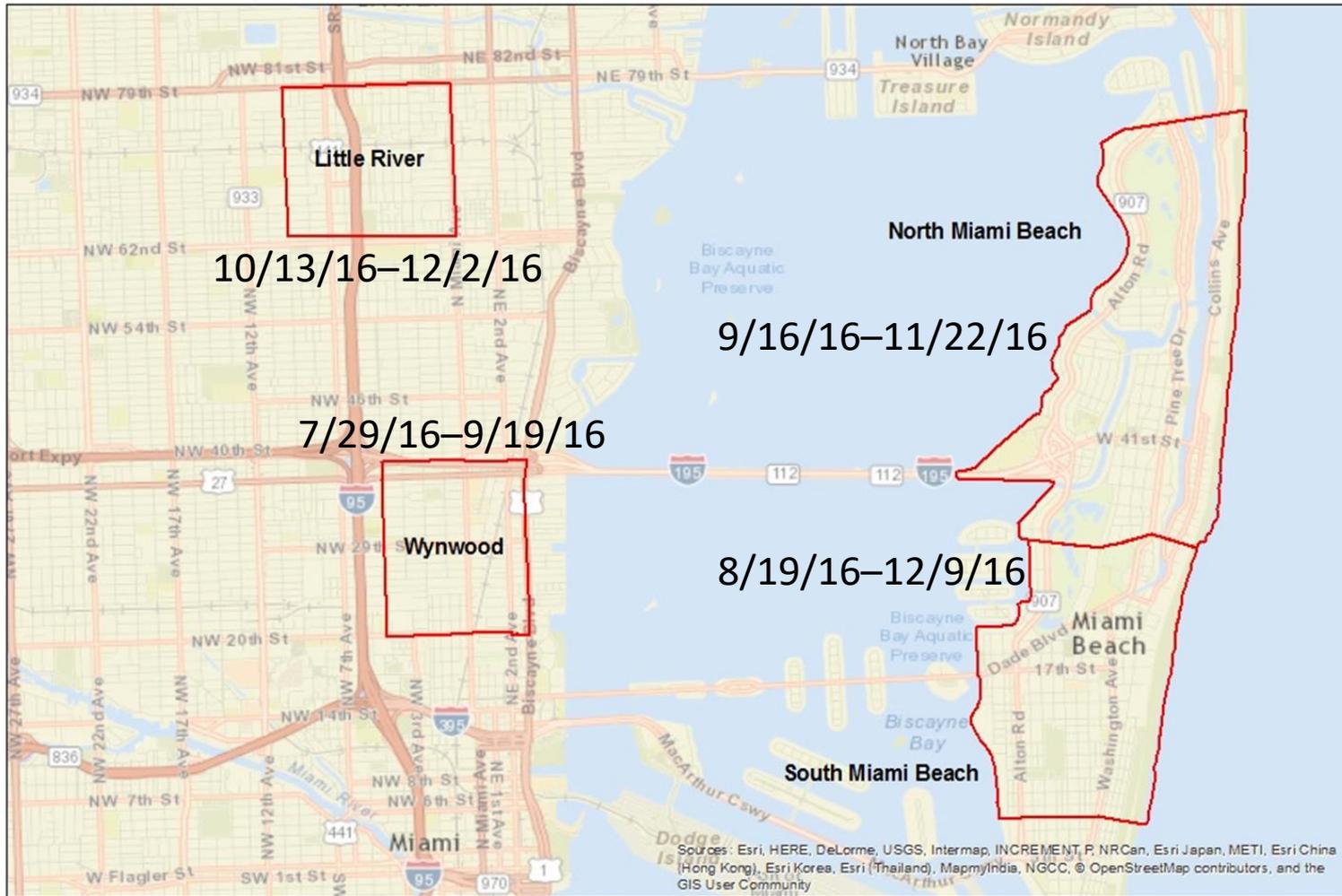
□ 150 meters



# Field Investigation of Non-Travel-Related Cases and Contacts in Miami



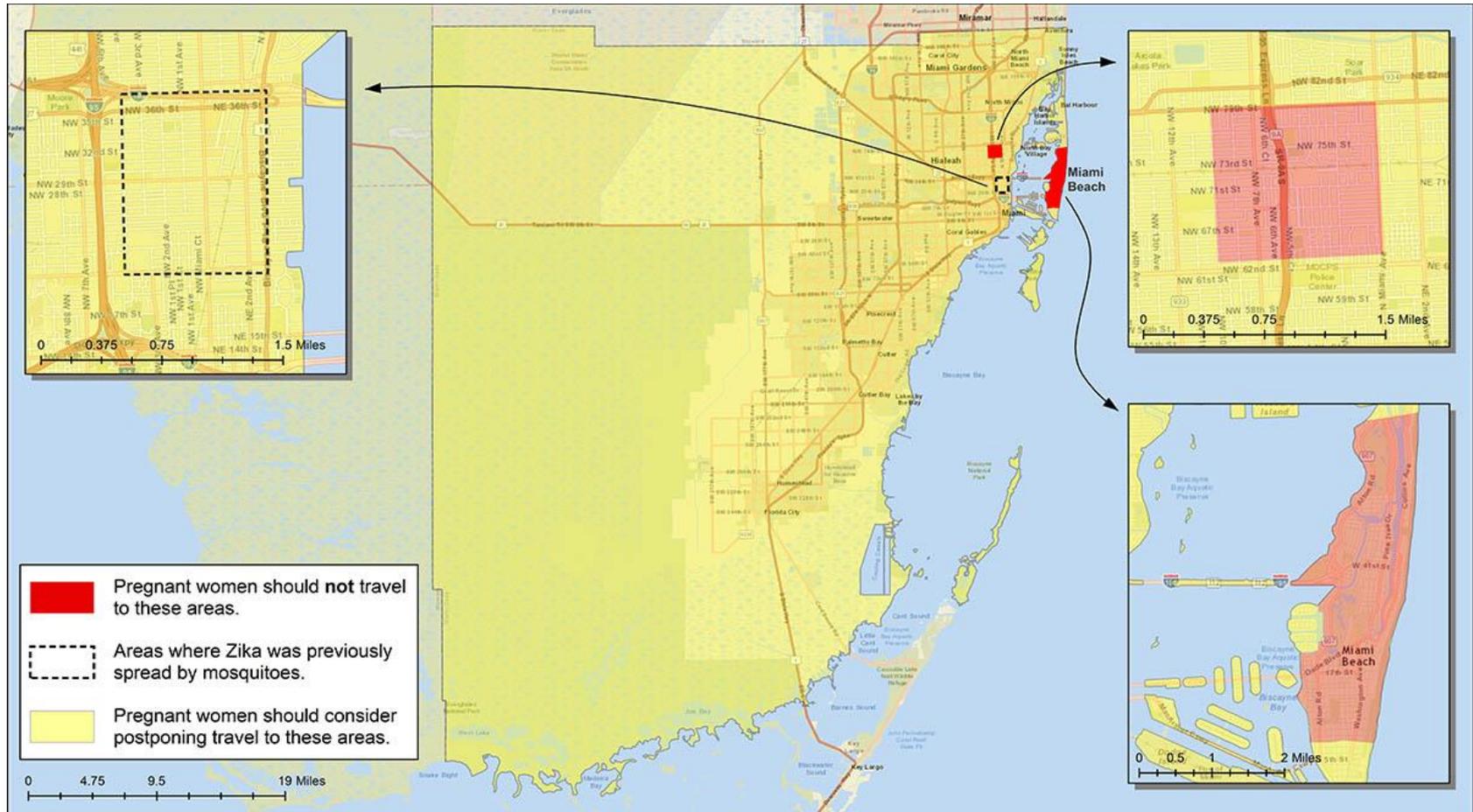
# Areas of Active Transmission



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



# CDC Travel Advisories



# Media Coverage and Public Perception



Photo courtesy of Miami Herald

# Occupational Risk

- Approximately 33% of cases potentially associated with workplace
- Common occupations
  - Construction workers
  - Valet attendants
  - Outdoor restaurants
  - Retail workers
  - Warehouse workers
- 50% of workplaces primarily outdoors, 32% enclosed, 16% semi-open, 2% unknown

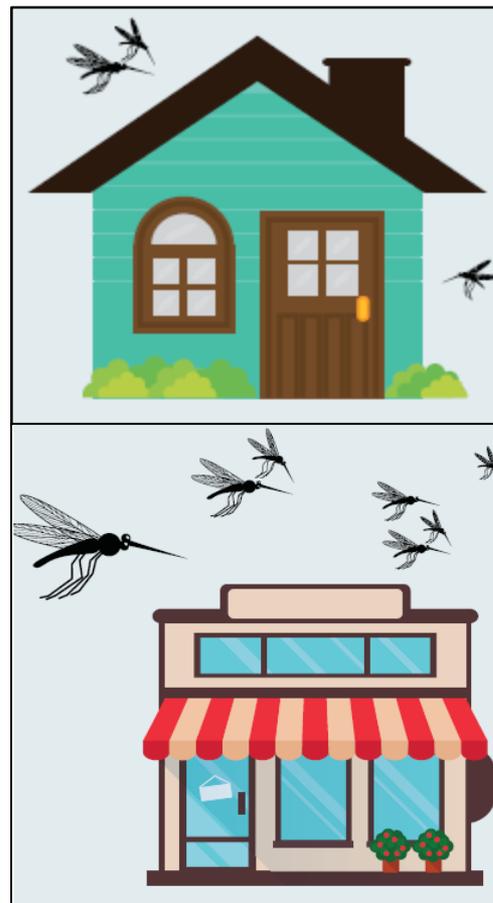


# What Worked Well

- ICS structure was critical for efficient management of a complex situation
- Many willing staff for surge
- Strong internal and external partner support and resources
- Good lines of communication, including establishment of formal process maps and data-sharing processes
- Implementation of Public Health Emergency to support missions
- Implement emergency approval processes

# Additional Lessons Learned

- Highly mobile population
- Sexual risk
- Occupational risk
- Active case finding
- Tracking of pregnant women and infants
- Laboratory testing
- Don't forget other arboviruses



# Summary

- Plan ahead
- Engage partners early
- We all play a role
- Zika preparedness and response is a team effort!



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