AES Incident Response Team
Division has been asked to respond with emergency deployments frequently —

1997 - Medfly eradication in Tampa
2000 - Mouse population outbreak – Apopka
2001 - T.S. Allison and WNV outbreak
2004 - Hurricanes Charlie, Frances
2005 - Hurricane Dennis
2008 – TS Fay
2009 - Spring Floods
2012 - Tree Termite
2012 - TS Debby
AES Incident Response Team

Established in 2004, formalized January 2005
Organized using ICS
Integrated with State EOC
Provides for:
  Rapid deployment
  Training
  Coordination
  Designated Equipment
Hurricane Effects Significant for Mosquito Control

- Structural Damage
- Loss of Power
- Debris Removal
- Flooding
- Defoliation – detritus for mosquito larvae
Hurricane Effects Significant for Mosquito Control

Structural Damage

Damage to residences and businesses

Damage to Mosquito Control Districts
Hurricane Effects Significant for Mosquito Control

- Loss of Power
- Debris Removal
- More chances of exposure to arbovirus
- Increased importance of nuisance mosquitoes
Hurricane Effects Significant for Mosquito Control

**Flooding**

**Defoliation – detritus for mosquito larvae**

Creates perfect conditions for mosquito breeding
Hurricane Related Mosquito Control

Result can be large numbers of mosquitoes

Mosquito Control is necessary for recovery and disease prevention

Mosquito Control should be planned as integral part of the hurricane recovery
Hurricane Related Mosquito Control

AES provides emergency mosquito control:

Mosquito control is provided in conjunction with Mosquito Control Districts - at the request of local governments - through the SEOC

Emergency contracts maintained with one or more qualified vendors

Covered under FEMA policy –

RP9523.10 – *Eligibility for Vector Control (Mosquito Abatement)*
AES Mosquito Control Incident Response Team

Standardized procedures –
• Activation – Commissioner’s authorization
• Coordination with SEOC
• Determination of funds availability
• Local government request

• Surveillance/Ranking
• Mapping of treatment areas
• 24 hour notice
• Sampling of product
• Post treatment surveillance
Surveillance is essential – pre and post treatment

Surveillance is conducted by MCD personnel, contractors, and AES personnel – significant part of control effort
## Surveillance is essential – pre and post treatment

<table>
<thead>
<tr>
<th>Zone #</th>
<th>Zone 1</th>
<th>Zone 1</th>
<th>Zone 1</th>
<th>Zone 2</th>
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<tbody>
<tr>
<td>Trap Location</td>
<td>Hardee County</td>
<td>Desoto County</td>
<td>Oscelola County</td>
<td>Pre or Post trtmt</td>
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<tr>
<td>Area:</td>
<td></td>
<td></td>
<td></td>
<td>Pre Spray</td>
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<tr>
<td>Pre or Post</td>
<td></td>
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<td></td>
<td>Pre Spray</td>
</tr>
<tr>
<td>Night of Spry</td>
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<td></td>
<td>Pre Spray</td>
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<tr>
<td>An crucians</td>
<td>72</td>
<td>110</td>
<td>32</td>
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<tr>
<td>Anopheles species</td>
<td>2</td>
<td></td>
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<tr>
<td>Anopheles atropos</td>
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<td>2</td>
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<tr>
<td>Ae vexans</td>
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<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Cs melanura</td>
<td>384</td>
<td>3056</td>
<td>56</td>
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<tr>
<td>Cx pip quinque</td>
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<td>3056</td>
<td>5152</td>
<td>302</td>
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<tr>
<td>Cx erraticus</td>
<td>24,000</td>
<td>5088</td>
<td>5152</td>
<td>96</td>
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<tr>
<td>Cx pip quinque</td>
<td>5088</td>
<td>3056</td>
<td>5152</td>
<td>192</td>
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<tr>
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<td>440</td>
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<tr>
<td>Oc atlanticus</td>
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<td>32</td>
<td>40</td>
<td>34</td>
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<tr>
<td>Oc infirmatus</td>
<td>64</td>
<td>32</td>
<td>40</td>
<td>34</td>
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<td>Oc triseriatus</td>
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<td>32</td>
<td>40</td>
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<tr>
<td>Ps howardii</td>
<td>64</td>
<td>32</td>
<td>40</td>
<td>34</td>
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<tr>
<td>Ps ciliata</td>
<td>64</td>
<td>32</td>
<td>40</td>
<td>34</td>
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<td>Ps columbae</td>
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<td>192</td>
<td>302</td>
<td>96</td>
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<tr>
<td>Ps ciliata</td>
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<td>192</td>
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<td>96</td>
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<tr>
<td>Ps ferox</td>
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<td>8</td>
<td></td>
</tr>
<tr>
<td>Ps ciliata</td>
<td>40</td>
<td>8</td>
<td>8</td>
<td></td>
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<tr>
<td>TOTAL</td>
<td>26,112</td>
<td>5,312</td>
<td>3,390</td>
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</table>

**Post treatment counts needed to verify effectiveness – retreatment if necessary**

**Contract requires 80% control**
<table>
<thead>
<tr>
<th>County</th>
<th>Number of Traps</th>
<th>Lowest pretreat numbers</th>
<th>Highest pretreat numbers</th>
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</thead>
<tbody>
<tr>
<td>Dixie</td>
<td>6</td>
<td>138</td>
<td>11,584</td>
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<tr>
<td>Union</td>
<td>5</td>
<td>915</td>
<td>2,717</td>
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<tr>
<td>Taylor</td>
<td>6</td>
<td>156</td>
<td>5,056</td>
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<tr>
<td>Madison</td>
<td>5</td>
<td>0</td>
<td>10,240</td>
</tr>
<tr>
<td>Glades</td>
<td>4</td>
<td>14,923</td>
<td>42,196</td>
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<tr>
<td>Putnam</td>
<td>2</td>
<td>358</td>
<td>392</td>
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<tr>
<td>Okeechobee</td>
<td>5</td>
<td>7,061</td>
<td>55,044</td>
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</tbody>
</table>
## Efficacy of treatment - 2008

### Comparison of Control Efficacy

<table>
<thead>
<tr>
<th>County</th>
<th>Low post treatment %</th>
<th>Highest post treatment %</th>
<th>Median Control Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dixie</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Union</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Taylor</td>
<td>-120.52</td>
<td>99.39</td>
<td>35.895</td>
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<tr>
<td>Madison</td>
<td>98.65</td>
<td>98.65</td>
<td>98.65</td>
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<tr>
<td>Glades</td>
<td>87.56</td>
<td>98.99</td>
<td>96.95</td>
</tr>
<tr>
<td>Putnam</td>
<td>-908.93</td>
<td>73.74</td>
<td>-417.595</td>
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<tr>
<td>Okeechobee</td>
<td>75.48</td>
<td>96.46</td>
<td>87.8</td>
</tr>
</tbody>
</table>
Applications performed when mosquitoes active – usually at night, or dawn or dusk

Treatment is conducted based on detections – applications of naled at 0.67 ounce/acre
AES Mosquito Control Incident Response Team

Treatment blocks mapped with GIS

Aircraft equipped with GPS to record treatment tracks
Mosquito Control Incident Response Team

- Advance team deployed for Hurricane Charley - August 17, 2004
- Based at Lee County Mosquito Control District, Lehigh Acres
- Began surveillance of affected area on August 18, 2004
- Began applications on August 19, 2004
Mosquito Control Incident Response Team

- 41 Division personnel participated
- 11,895 hours recorded
- $11,270,641 expended
- 40,798 gallons of Dibrom applied
- Treated 8,004,605 acres
Hurricane Dennis
Hurricane Katrina
Hurricane Wilma

2005 Experience
Mosquito Control Incident Response Team

- Deployed for Hurricane Dennis – July 19, 2005
- Low rainfall – only seven county requests
- Only one county treated
- 130,000 acres treated
- No activation for Katrina, Wilma
Deployments since 2005

- Joint training with MCDs in 2006/2007
- Tropical Storm Fay – 2008
  - Seven counties treated
- North Florida Floods – 2009
  - Three counties treated
- Tree Termites – 2012
FEMA Policy -

- FEMA Recovery Policy
- RP9523.10
- Sep 12 2006

- Vector Control is eligible for reimbursement under some conditions –
  - State Department of Health and CDC must concur.
  - Consultation with USFWS must have been done.
  - Surveillance/Monitoring is essential
FLORIDA DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES RESPONSE

Dale Dubberly
RADIOLOGICAL EMERGENCY:

FDACS
Florida Department of Agriculture and Consumer Services
Ingestion Planning Zones

Figure 1-1
NUCLEAR POWER PLANT SITES IN FLORIDA
10 MILE EMERGENCY AND 50 MILE INGESTION PLANNING ZONES

Legend
- 10 Miles
- 50 Miles

Revised 07/08
What’s Next?
- Continued Training
- Exercises
- NPDES issues
- Deployments
  - Active hurricane seasons – for the next 20 years
  - Disease outbreak
- Other?
Would you like to be part of the IRT Team?

1. Contact your immediate supervisor for approval.
2. Once approved contact your Bureau Chief.
3. Bureau Chief will make the recommendation to the IRT team.
4. IRT IC will contact you.
Questions?