# Florida Department of Agriculture and Consumer Services

***Adam H. Putnam***

***COMMISSIONER***

## Division of Agricultural Environmental Services

# *Incident Response Team*

# 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 outbr**

**2004 - Hurricanes Charlie, Frances,**

**2005 - Hurricane Dennis**

**2008 – TS Fay**

**2009 - Spring Floods**

**2012 - Tree Termite**

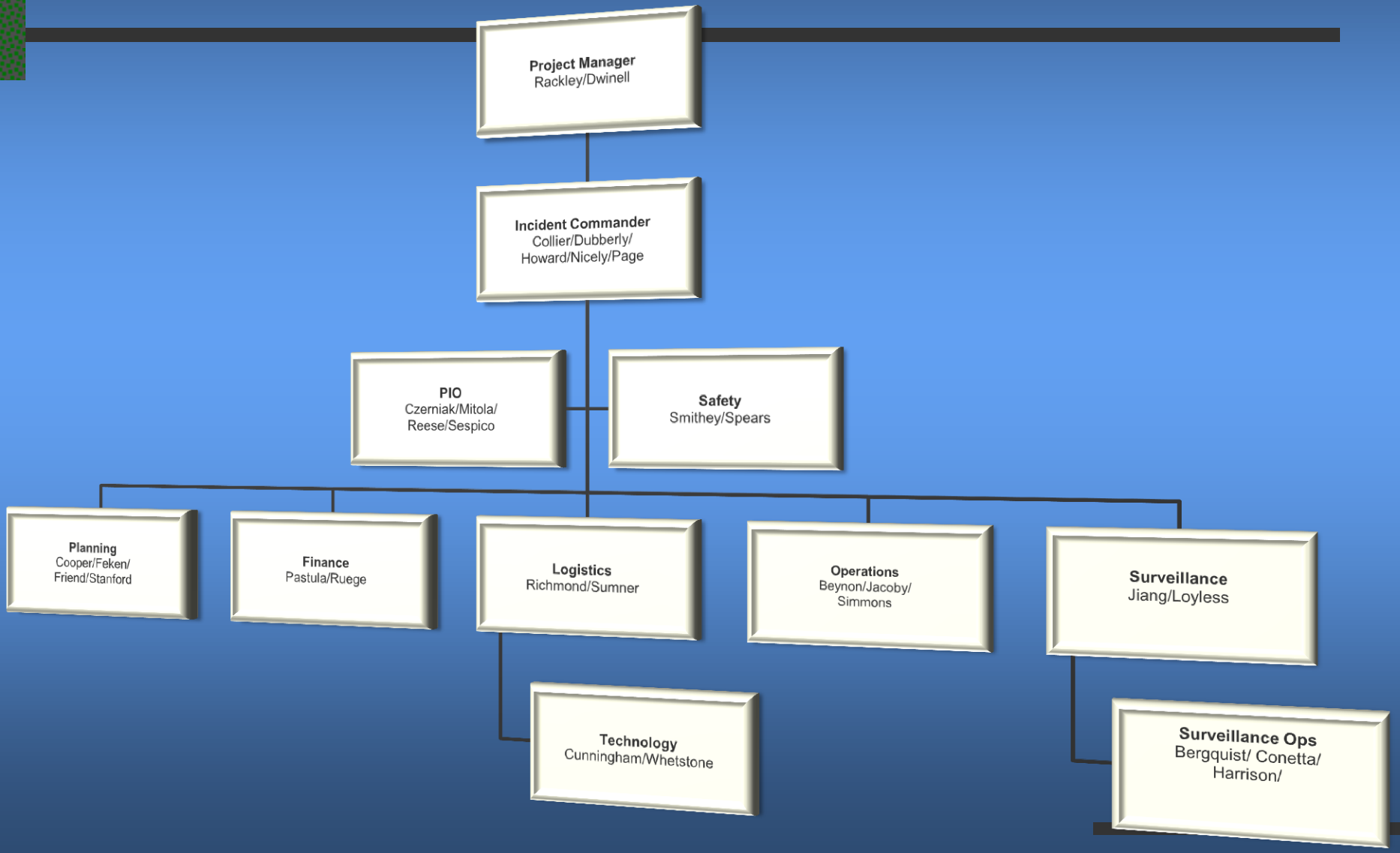
**2012- TS Debby**

# AES Incident Response Team

## 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

# AES Incident Response Team



# Hurricane Effects Significant for Mosquito Control

**Structural Damage**

**Loss of Power**

**Debris Removal**

**Flooding**

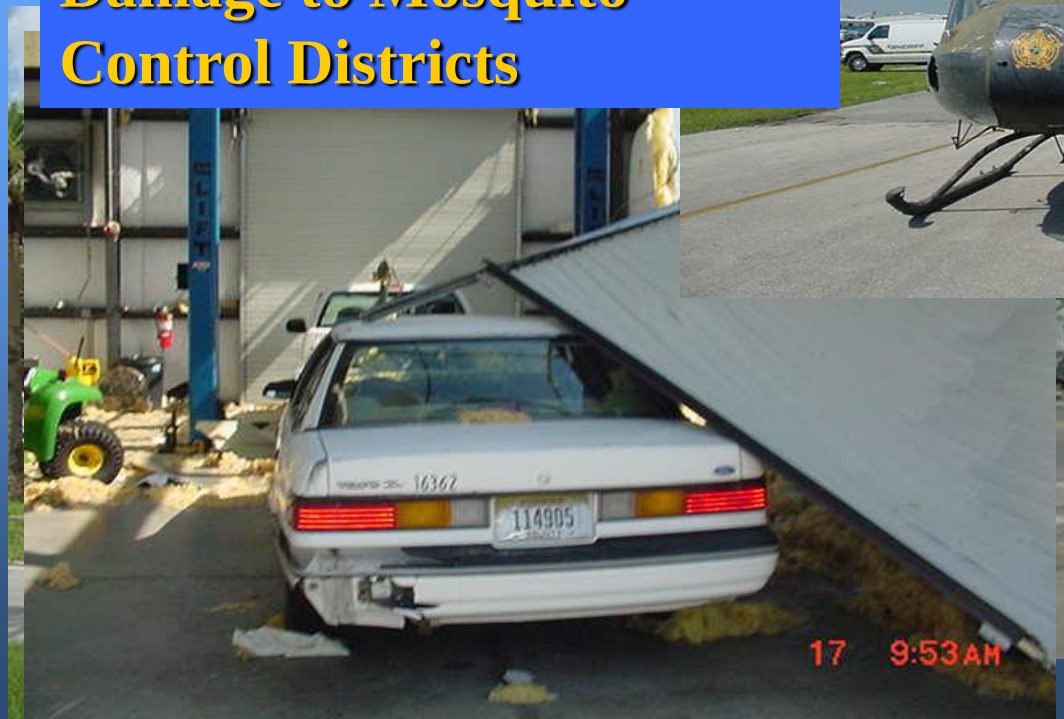
**Defoliation – detritus for mosquito larvae**

# 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

# AES Mosquito Control Incident Response Team

**Surveillance is essential – pre and post treatment**

**Surveillance is conducted by MCD personnel, contractors, and AES personnel – significant part of control effort**

# AES Mosquito Control Incident Response Team

**Surveillance is essential – pre and post treatment**

| Zone # | Zone 1 | | | Zone 1 | | | Zone 1 | Zone 2 |
|---|---|---|---|---|---|---|---|---|
| Trap Location | Hardee County | | | Desoto County | | | Oscelola County | |
| Area: | | | | | | | | |
| Pre or Post trtmt | *Pre Spray* | *Pre Spray* | *Pre Spray* | *Pre Spray* | *Pre Spray* | *Pre Spray* | *Pre Spray* | *Pre Spray* |
| *Night of Spray* | | | | | | | | |
| *Date Collected* | *9/9/2004* | *9/9/2004* | *9/9/2004* | *9/9/2004* | *9/9/2004* | *9/9/2004* | *9/8/2004* | *9/8/2004* |
| *An crucians* | | | | 72 | | | 110 | 32 |
| *Anopheles species* | | | | | | | | |
| | | | | | | | | |
| | | | | | | | 2 | |
| | | | | | | | | |
| | | | | | | | 10 | |
| | | | | | | | 2 | |
| | 00 | 5088 | 3056 | 5152 | 576 | 4608 | 384 | 3056 |
| | | | | | | | | |
| | | | | | | | 56 | |
| | | | | | | | 4 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | 32 | 8 | | | | 32 |
| *Oc atlanticus* | | | | | | | | |
| *Oc infirmatus* | | | | | | | 34 | |
| *Oc triseriatus* | | | | | | | | |
| *Ps howardii* | 64 | 32 | | 40 | | | | |
| *Ps ciliata* | | | | | | 8 | | |
| *Ps columbiae* | 2048 | 192 | 302 | 440 | 64 | 960 | 96 | 302 |
| *Ps ciliata* | | | | | | | | |
| *Ps ferox* | | | | | | | | |
| *Uranotaenia* | | | | | | | | |
| *TOTAL* | 26,112 | 5,312 | 3,390 | 5,712 | 640 | 5,576 | 698 | 3,422 |

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

**Contract requires 80% control**

# Surveillance Results - 2008 TS Fay

| County | Number of Traps | Lowest pretreat numbers | Highest pretreat numbr |
|---|---|---|---|
| Dixie | 6 | 138 | 11,584 |
| Union | 5 | 915 | 2,717 |
| Taylor | 6 | 156 | 5,056 |
| Madison | 5 | 0 | 10,240 |
| Glades | 4 | 14,923 | 42,196 |
| Putnam | 2 | 358 | 392 |
| Okeechobee | 5 | 7,061 | 55,044 |

# Efficacy of treatment - 2008

Comparison of Control Efficacy

| County | Low post treatment % | Highest post treatment % | Median Control Percentage |
|---|---|---|---|
| Dixie | 0 | 100 | 100 |
| Union | 100 | 100 | 100 |
| Taylor | -120.52 | 99.39 | 35.895 |
| Madison | 98.65 | 98.65 | 98.65 |
| Glades | 87.56 | 98.99 | 96.95 |
| Putnam | -908.93 | 73.74 | -417.595 |
| Okeechobee | 75.48 | 96.46 | 87.8 |

# AES Mosquito Control Incident Response Team

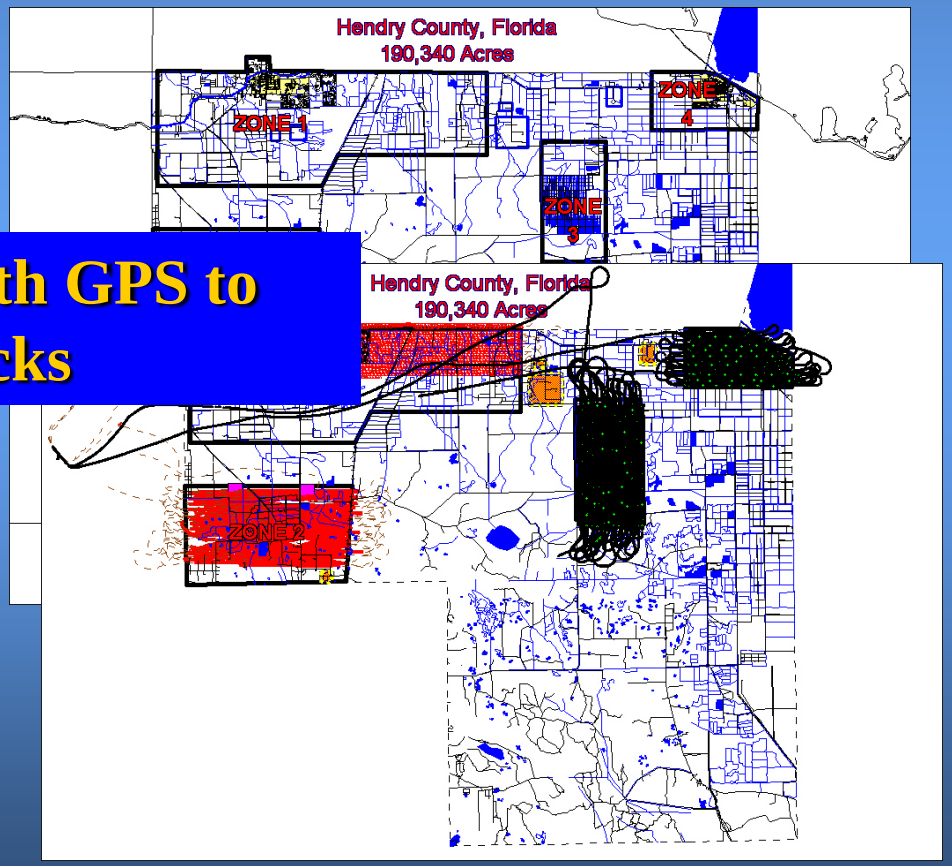
**Treatment is conducted based on detections – applications of naled at 0.67 ounce/acre**

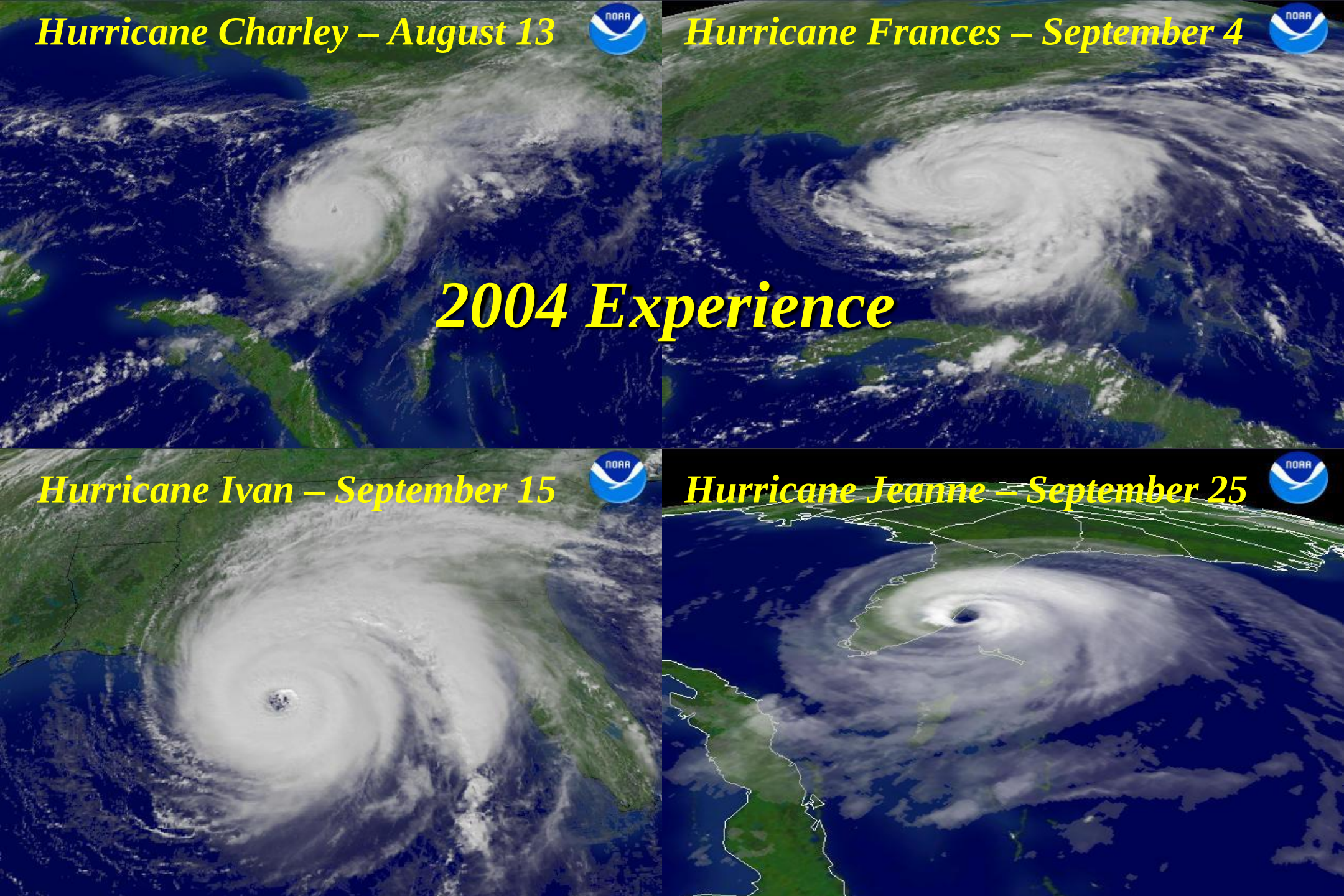
**Applications performed when mosquitoes active – usually at night, or dawn or dusk**

# AES Mosquito Control Incident Response Team

**Treatment blocks mapped with GIS**

**Aircraft equipped with GPS to record treatment tracks**




Hurricane Charley – August 13
Hurricane Frances – September 4
2004 Experience
Hurricane Ivan – September 15
Hurricane Jeanne – September 25

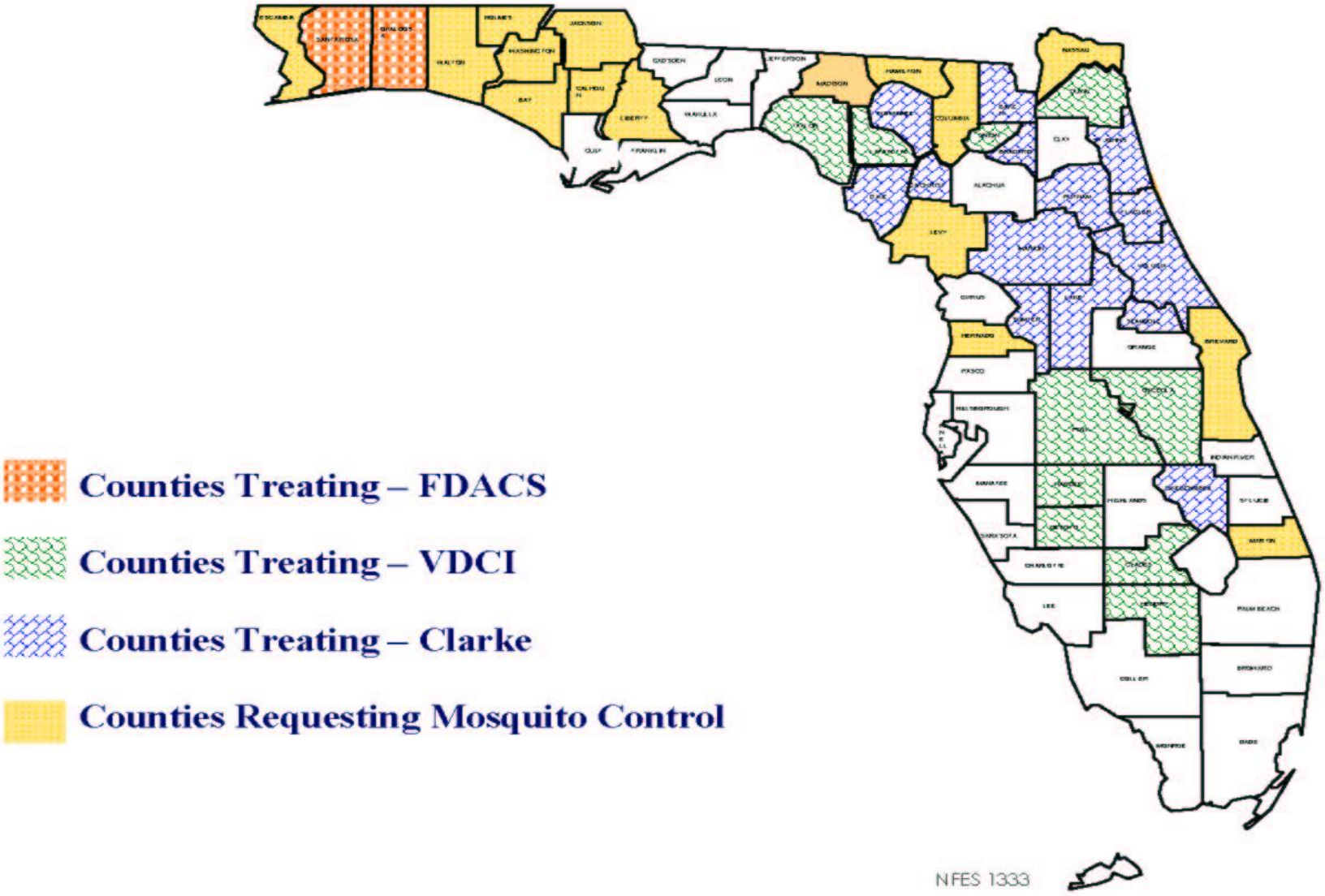
# Mosquito Control Incident Response Team

- 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

# COUNTY STATUS





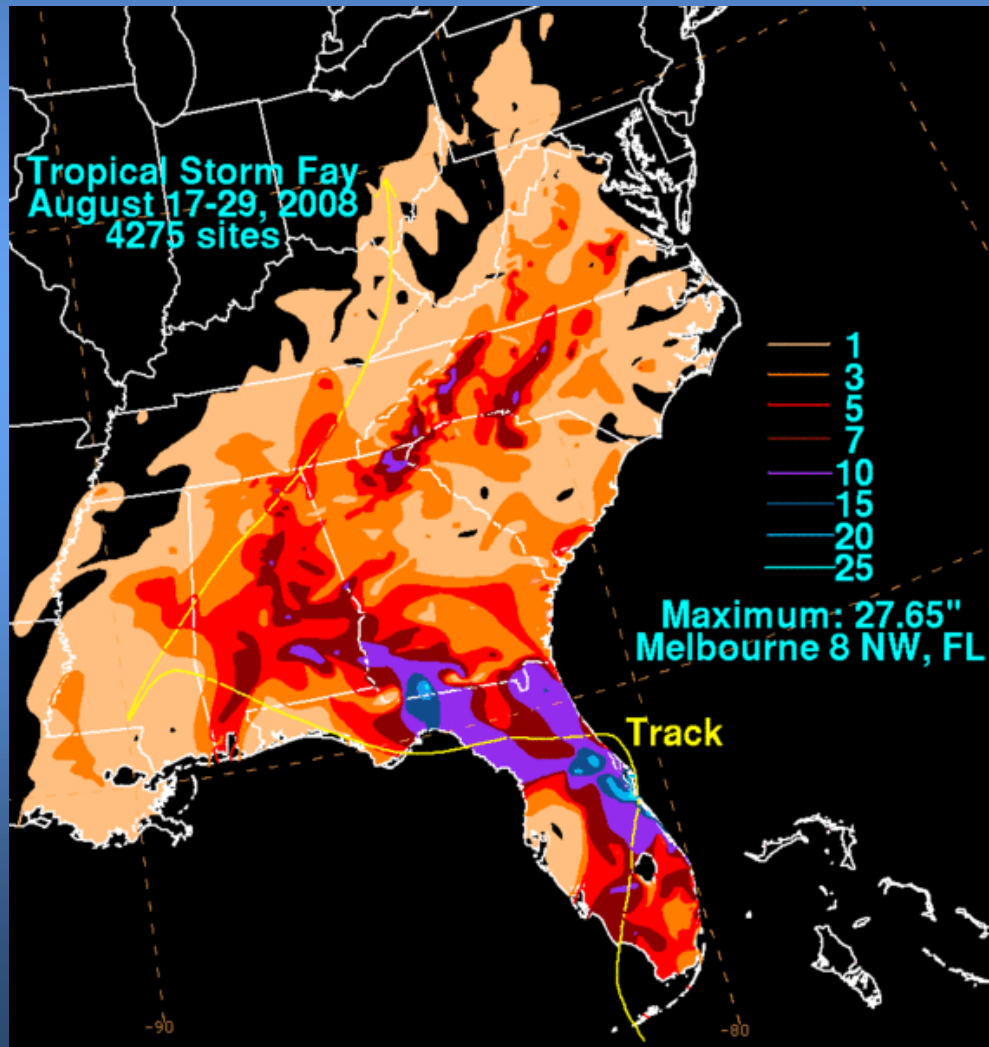
# 2005 Experience

# 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:

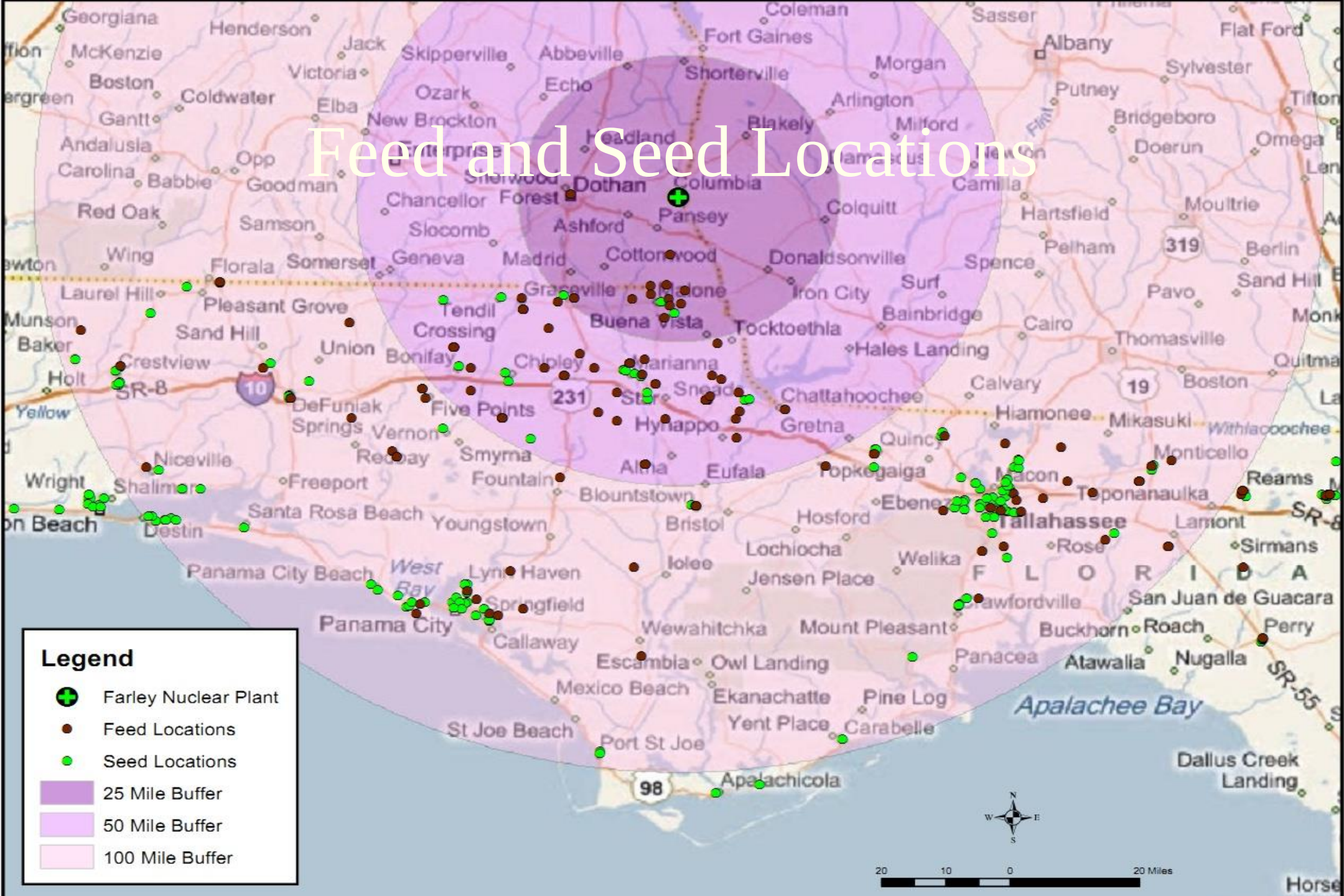
FDACS
Florida Department of Agriculture and Consumer Services

# Ingestion Planning Zones



FIGURE 1-1

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


Feed and Seed Locations
Legend
Farley Nuclear Plant
Feed Locations
Seed Locations
25 Mile Buffer
50 Mile Buffer
100 Mile Buffer
Dothan
Columbia
Pansey
Ashford
Cottonwood
Donalsonville
Colquitt
Blakely
Arlington
Shorterville
Fort Gaines
Coleman
Albany
Sasser
Flat Ford
Sylvester
Putney
Bridgeboro
Doerun
Omega
Moultrie
Hartsfield
Pelham
Camilla
Iron City
Surf
Spence
Pavo
Sand Hill
Berlin
Cairo
Bainbridge
Thomasville
Hales Landing
Tocktoethla
Buena Vista
Graceville
Malone
Tendil
Crossing
Pleasant Grove
Florala
Somerset
Geneva
Madrid
Slocomb
Samson
Red Oak
Chancellor
Forest
Sherwood
Enterprise
Headland
Opp
Goodman
Babbie
Carolina
Andalusia
Gantt
Boston
Coldwater
McKenzie
Victoria
Elba
New Brockton
Ozark
Echo
Abbeville
Skipperville
Jack
Henderson
Georgiana
Laurel Hill
Wing
Munson
Baker
Holt
Crestview
Sand Hill
Union
Bonifay
Chipley
Marianna
Sneads
Star
Hyhappo
Gretna
Chattahoochee
Calvary
Hiamonee
Mikasuki
Withlacoochee
Monticello
Boston
Quitman
Monk
Reams
Teponanaulka
Tallahassee
Lamont
Rose
Sirmans
Ebenezer
Topkegaiga
Quincy
Macon
Niceville
Wright
Shalimar
Freeport
DeFuniak Springs
Vernon
Redbay
Smyrna
Alma
Eufala
Fountain
Blountstown
Bristol
Hosford
Lochiocha
Welika
Jensen Place
Iolee
Lynn Haven
Springfield
Panama City
Panama City Beach
West Bay
Callaway
Wewahitchka
Mount Pleasant
Crawfordville
Panacea
Buckhorn
Roach
Perry
Atawalia
Nugalla
San Juan de Guacara
Escambia
Owl Landing
Mexico Beach
Ekanachatte
Pine Log
Yent Place
Carabelle
St Joe Beach
Port St Joe
Apalachicola
Apalachee Bay
Dallus Creek Landing
Horse
Santa Rosa Beach
Youngstown
Destin
Yellow
SR-8
SR-55
SR-8
231
10
98
19
319
N
S
E
W
20
10
0
20 Miles

# AES IRT

**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?