

Hurricane Hotwash

Presented by:

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Director S.E. Region, Ports and Maritime Group

CH2M HILL

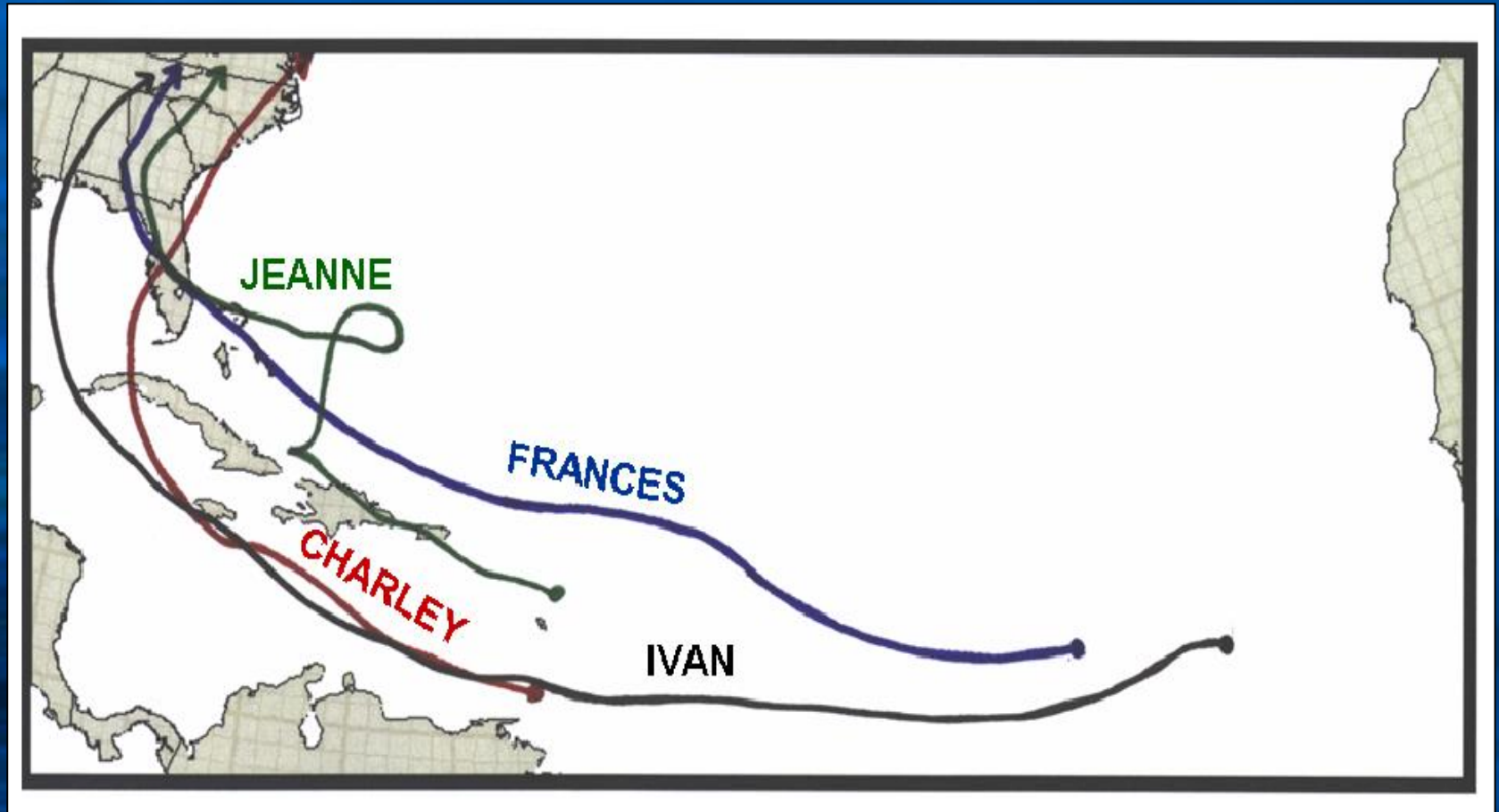
AAPA Cruise Committee

February 18, 2005

New Orleans, LA



Tracks of 2004 Storms

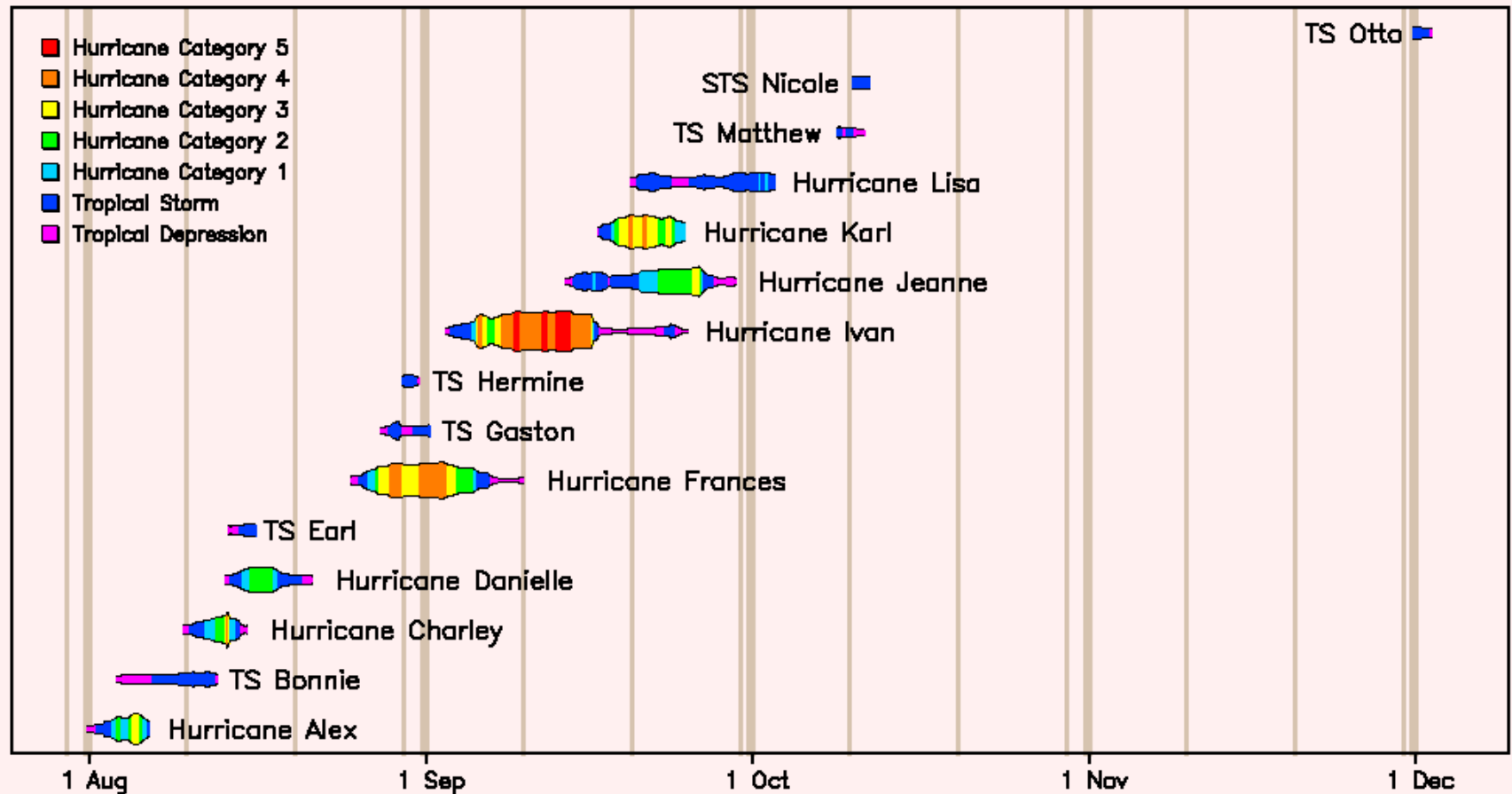


Welcome to **Florida**

We are here

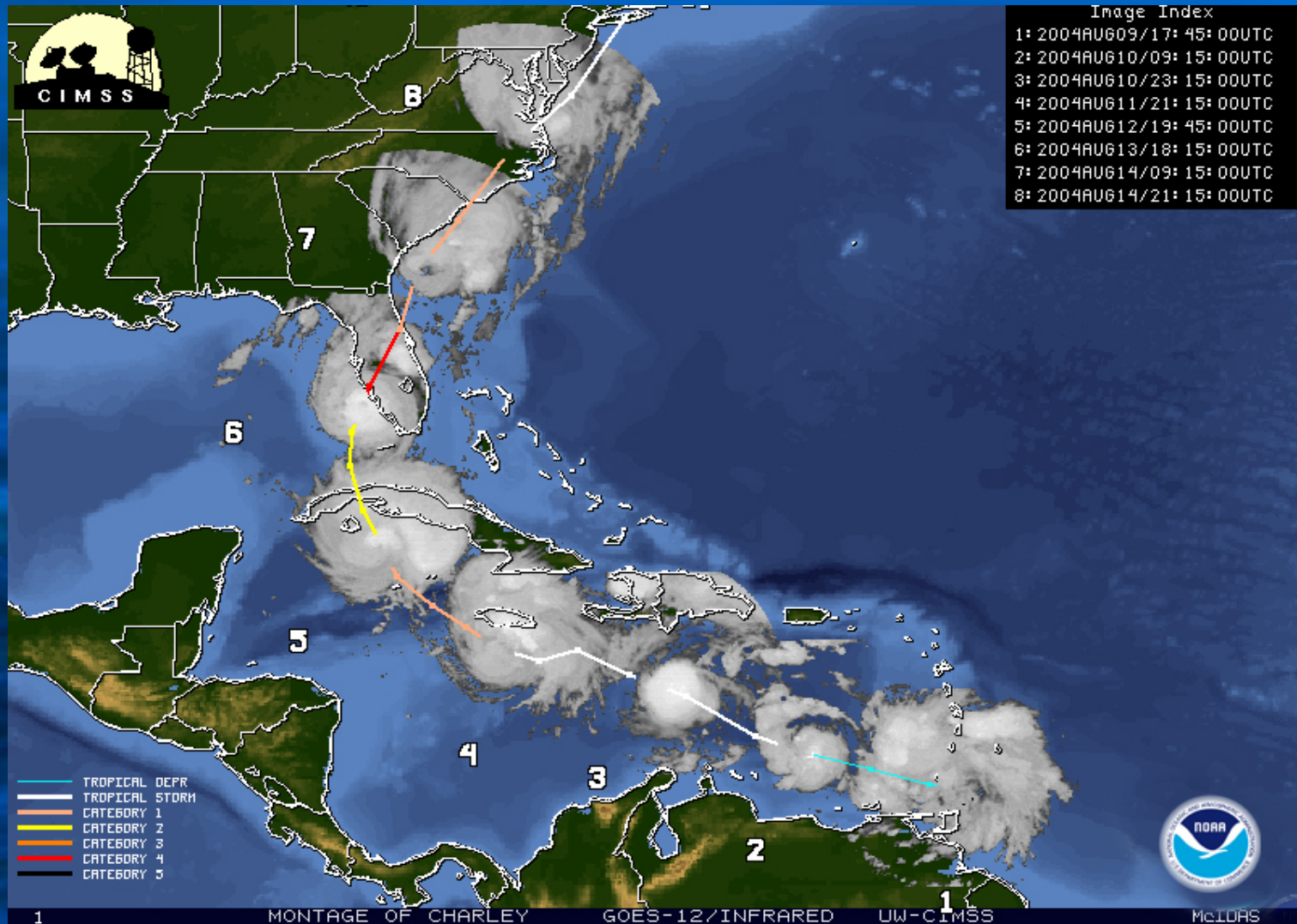


2004 North Atlantic Tropical Storms

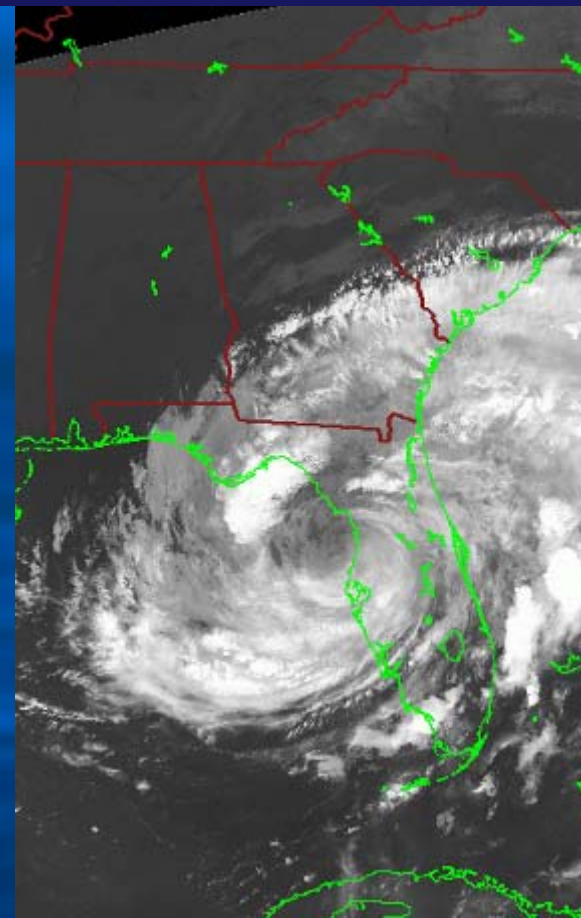
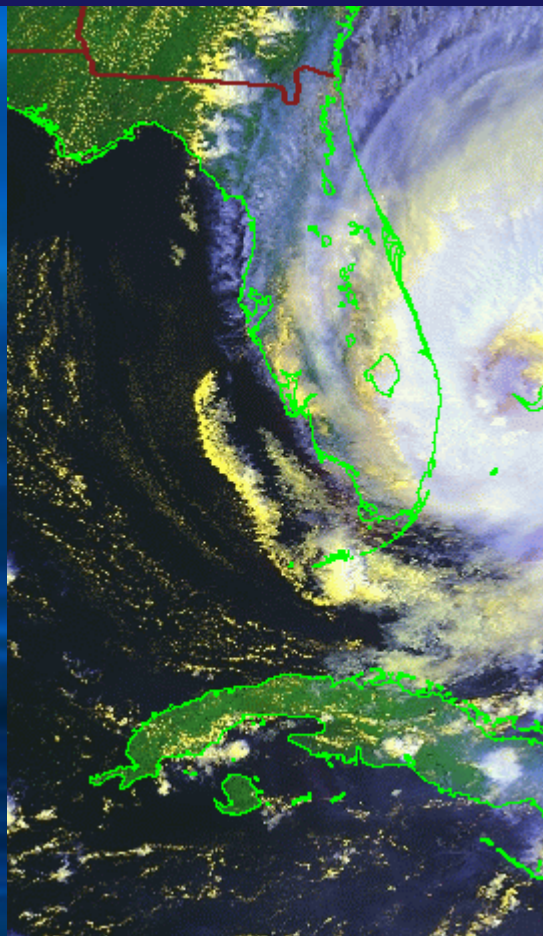
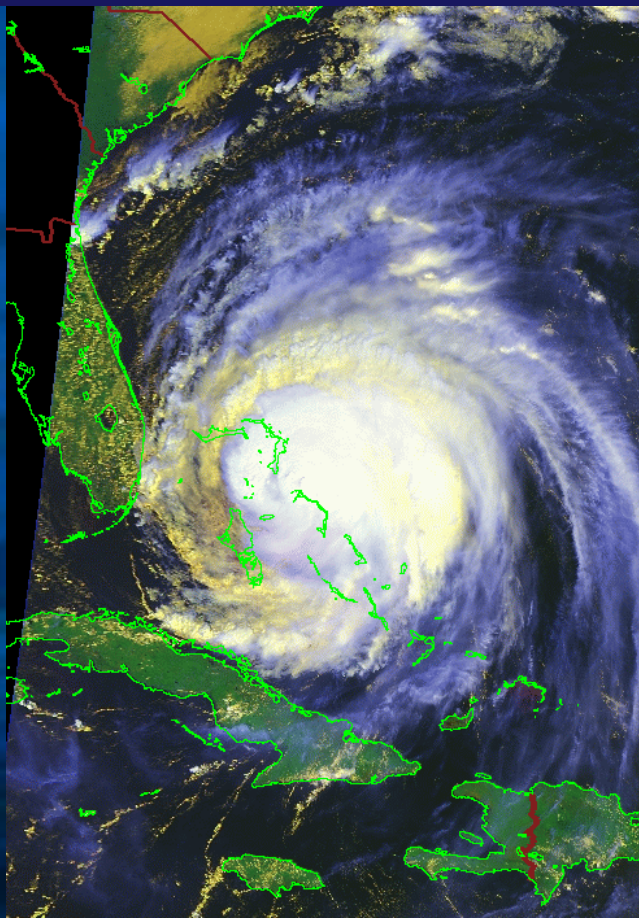


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Hurricane Charlie



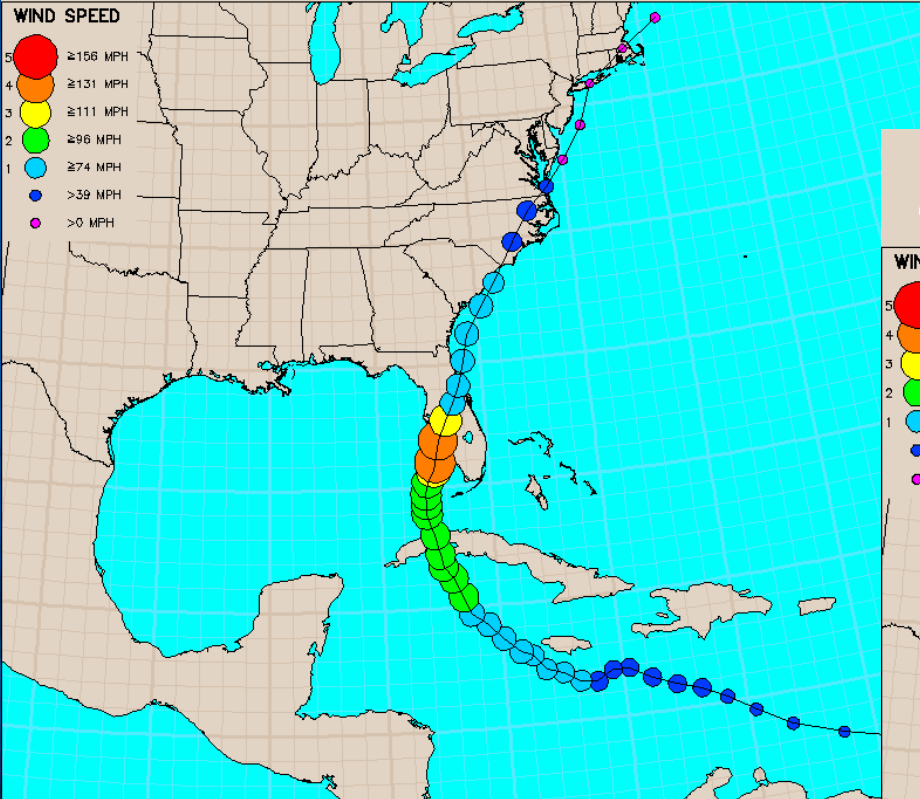
Hurricane Frances



60 of 67 Counties of Florida directly affected by Hurricane Frances

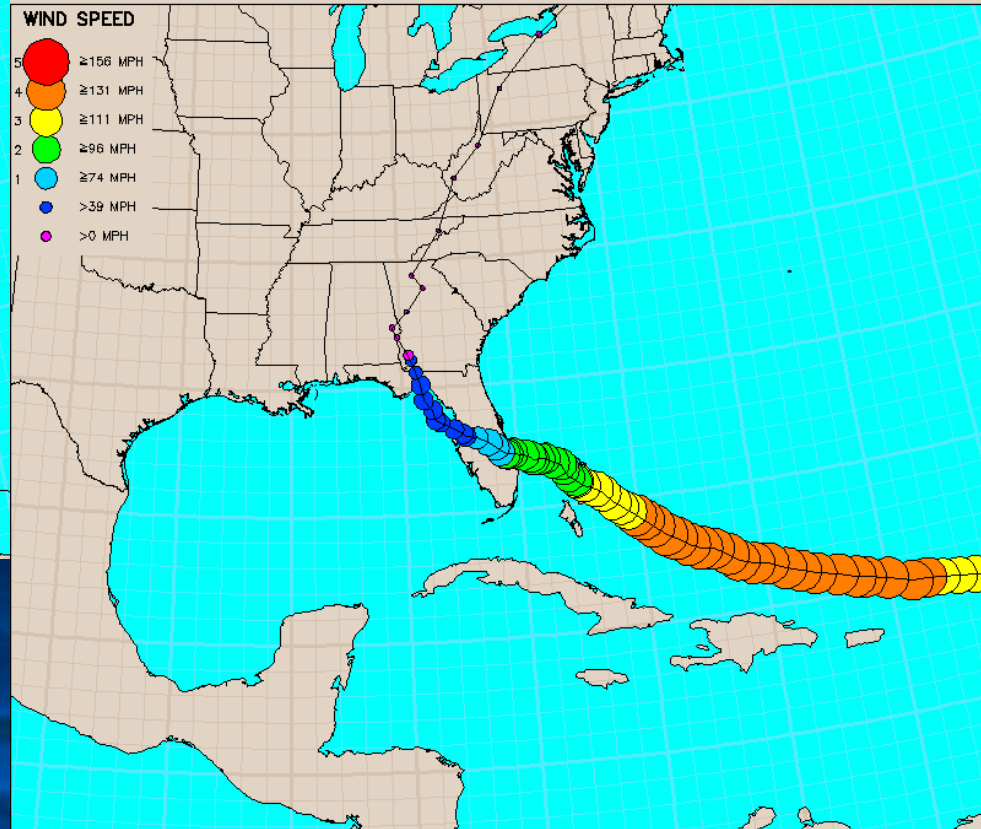
Hurricane Charley

17:45 Mon August 9, 2004 to 15:00 Sun August 15, 2004 UTC



Hurricane Frances

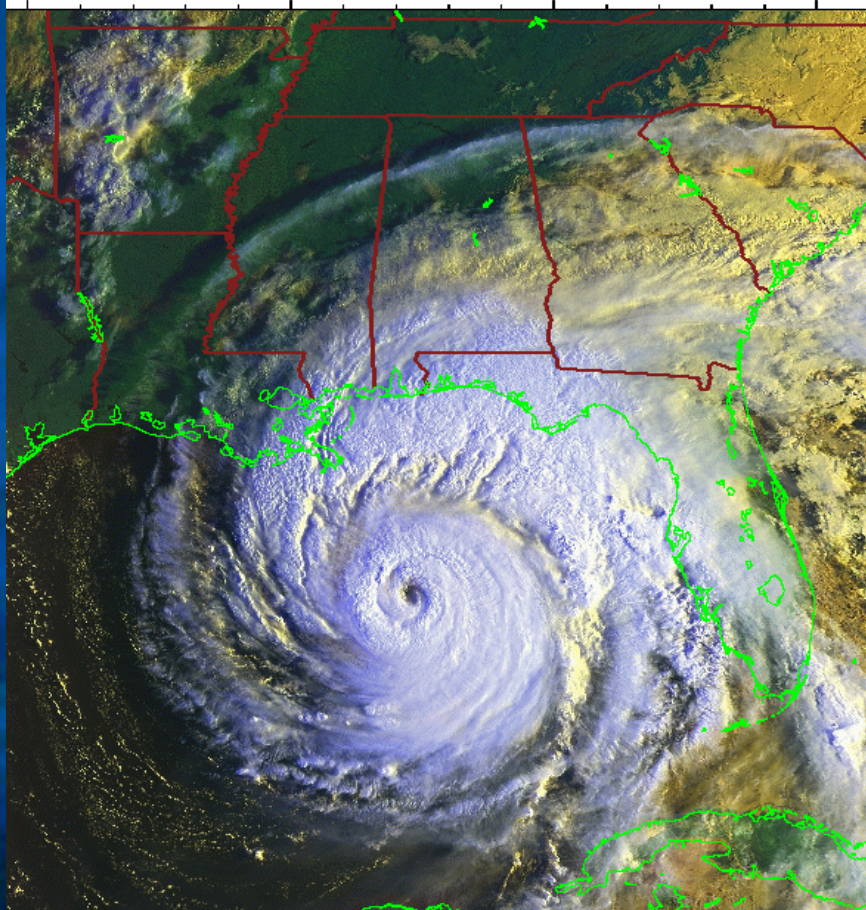
03:00 Wed August 25, 2004 to 00:00 Fri September 10, 2004 UTC



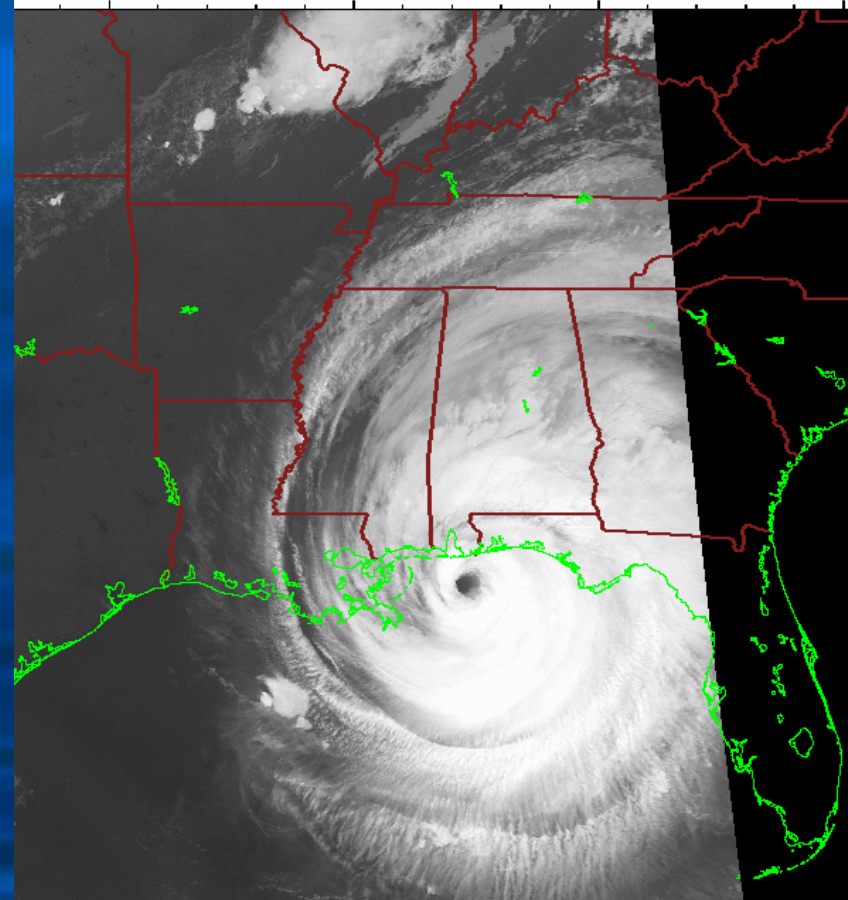
Ivan & Jeanne - beautiful & deadly



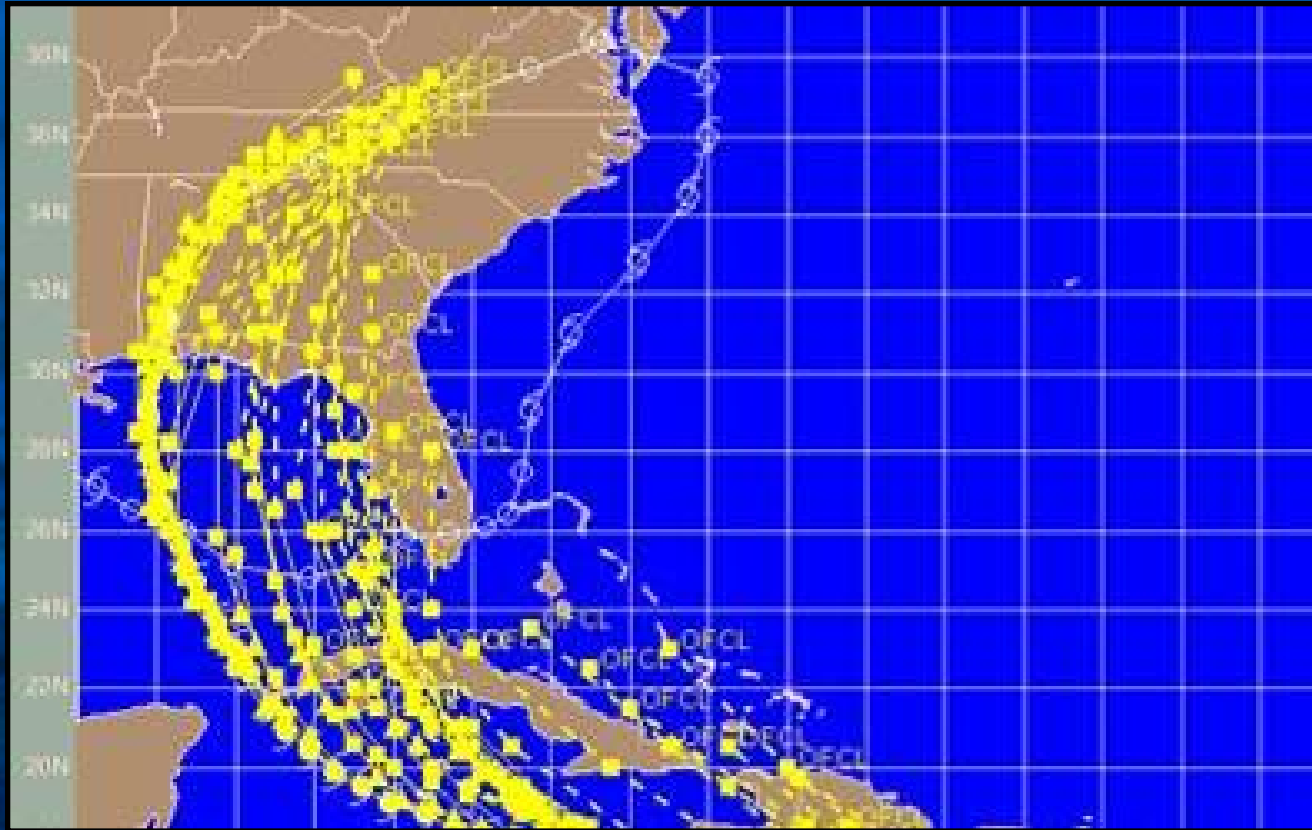
Hurricane Ivan



Hurricane Ivan



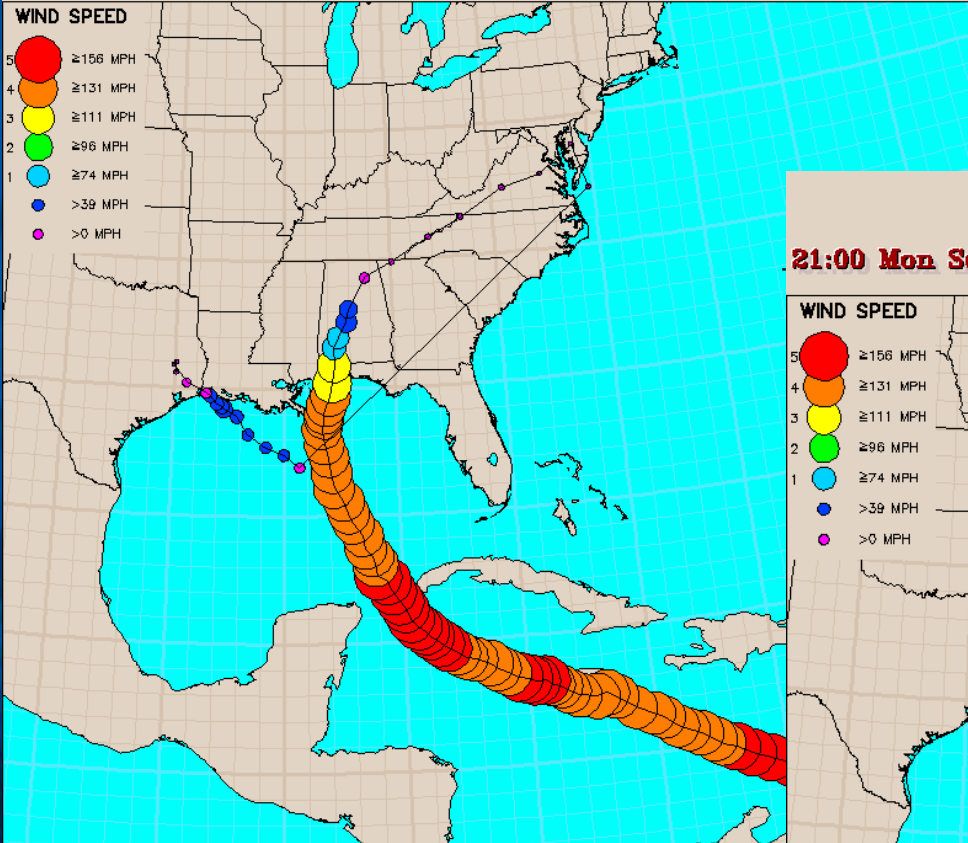
Predictions - Ivan



Predictions Change with Time

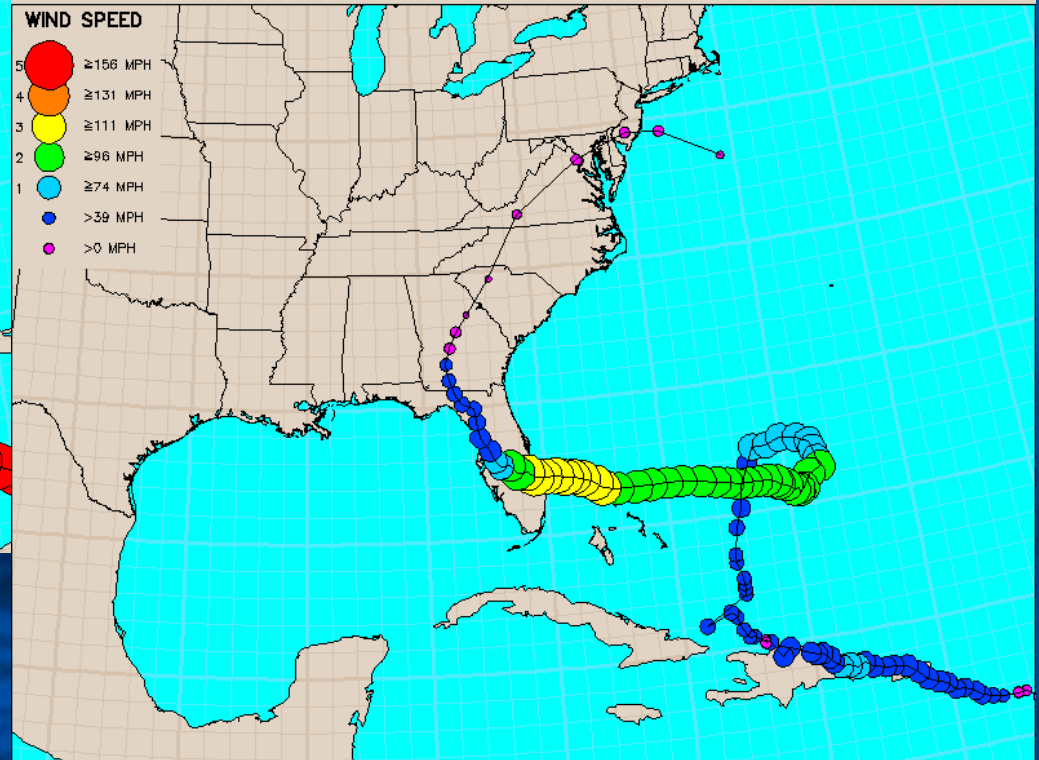
Hurricane Ivan

21:00 Thu September 2, 2004 to 03:00 Sat September 25, 2004 UTC

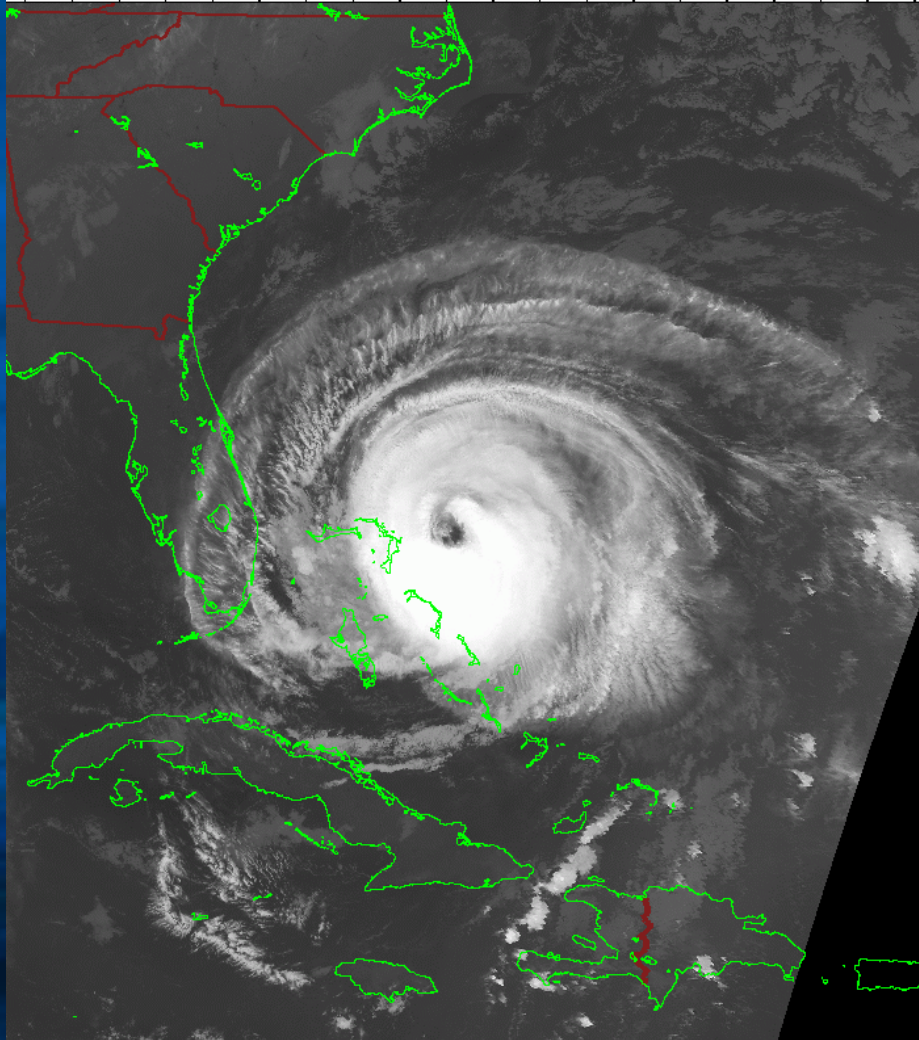


Hurricane Jeanne

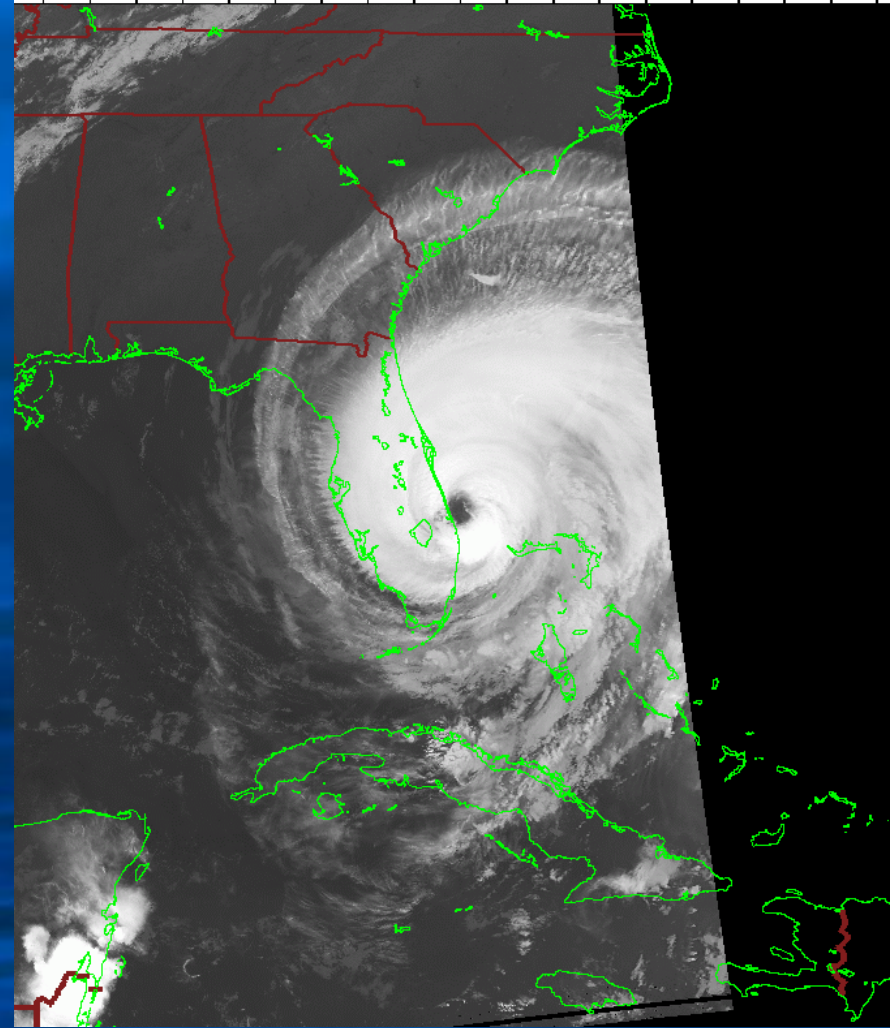
21:00 Mon September 13, 2004 to 15:00 Wed September 29, 2004 UTC



Hurricane Jeanne



Hurricane Jeanne



MILLIONS FLEEING



Gov. Bush wants state declared disaster area

By JEFF KIMMOTH and MARY HILL
AP/WIDE WORLD PHOTOS

Thousands jammed airports and highways Thursday seeking to escape Hurricane Frances as the largest evacuation in Florida history got under way.

More than 2.5 million people from Miami north to Flagler County were ordered by Gov. Jeb Bush to flee the coast and low-lying areas.

During a visit to the Broward County Emergency Operations Center, Bush warned that the storm "is going to hit us. And it's going to hit us hard."

The governor asked his brother, President Bush, to declare the entire state a disaster area. It was the second such request in three weeks, since Charley reawakened Floridians to the horrors of hurricanes.

Those parks will close early today, and Orlando International Airport will shut down at noon. Unable to extend guests' bookings, hotels were dealing with frantic tourists who had no way to get home.

PLEASE SEE **FLEEING, A14**



Eric Anderson, 32, carries his fan Thursday in Waterford Lakes east of Orlando to prepare for Hurricane Frances.

MAGNITUDE | **FLOODING**

Florida Tells 2.5 Million Residents To Flee Hurricane

86% of Florida Population will be affected



Primary Issues

- **Lost Days - Preparation & Cleanup**
- **Ship Access - Shoaling & Sunken Obstructions**
- **Downed Vegetation**
- **Water Damage**
- **Power Outage**
- **Down Light Poles**
- **Security**
- **Roofing Manpower and Materials**
- **Temporary Loss of Staff Due to Issues at Home**
- **Documentation of Losses for Insurance \$\$**



Costs of 2005 Hurricanes

Damage estimates of the four U.S. landfalling hurricanes in 2004 (in **billions** of dollars).

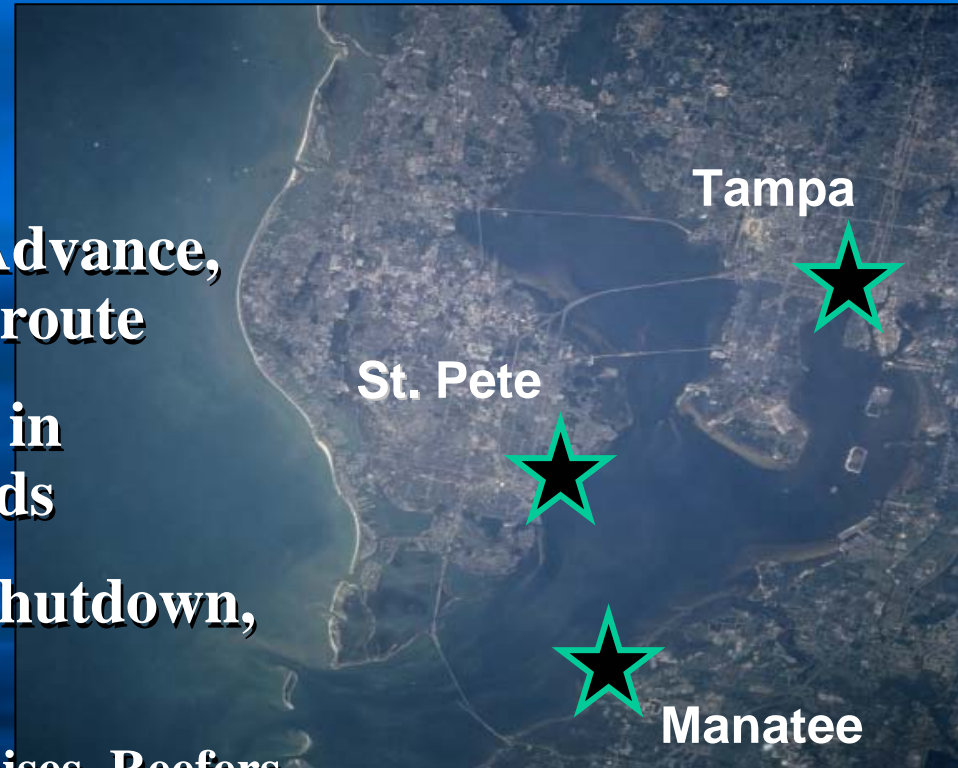
STORM	INSURED	Total
Charley	7.5	15
Frances	4.5	9
Ivan	4.5	9
Jeanne	6.0	12
Total	22.5	45
Andrew (1992) in 2004 Dollars	20	40

The Caribbean Cruise Market



Tampa Bay

- **No Damage or Shoaling**
- **Shut Down Port 3 Times**
- **Decisions are Made 3 Days in Advance, So Ships Can Leave or Re-route**
- **Prioritize Inbound Ships 24 hrs in advance of Gale Force Winds**
- **Matrix Decision Approach to Shutdown, Re-opening, & Recovery**
 - **Hazardous Cargo, Petroleum, Cruises, Reefers.**
- **Check that Aids to Navigation are on Station -Daylight - P.O.R.T.S. System helped**



Tampa Port Authority

- **Critical Petroleum Distribution Impacts**
- **Entire State had Storm Impacts - All Ports**
- **Citizens Listened and Fueled Up**
- **Strained Fuel Distribution Cycle**
- **Demanded Shipments Which Were Disrupted**
- **TPA imports fuel for Orlando International Airport**
- **Orlando Distribution Center Ran-out**
- **Port Everglades Supplies Ran Low**
- **Emergency Deliveries Were Being Made by Truck**



Tampa Port Authority

- **Lessons Learned Each Storm**
- **Electrical Power was lost at the Petroleum Depots and Planned Outages Elsewhere**
- **Couldn't Pump Fuels: Ships, Tanks, Trucks**
- **Governor was Called - Gov's Office Called TECO**
- **Repairs Were Made and Power Re-routed Around Planned Outages to Power Fuel Depots - Got it Going Again!**



Port Canaveral

- H. Charley – Little or no damage.
- Closed port for one day?
- H. Francis – Damage to facilities: \$725,000
- Lost business: \$951,000
- H. Jeanne – Damage to facilities: \$250,000 max.
- Lost business: \$350,000
- Between the three hurricanes,
- Closed port for a total of 12 days.
- Main problem was entrance channel shoaling.



Port Canaveral



Port of Palm Beach

BUILDING INTERIORS:

- Maritime Office Complex/Cruise -Terminal – Extensive Water Intrusion to Walls, Ceilings, Carpets
- Maritime Office Building/Tropical - Extensive Water Intrusion to Walls, Ceilings
- Building 11/Gulfstream – 10 Roof Vents Torn Off



Port of Palm Beach

BUILDING DAMAGES:

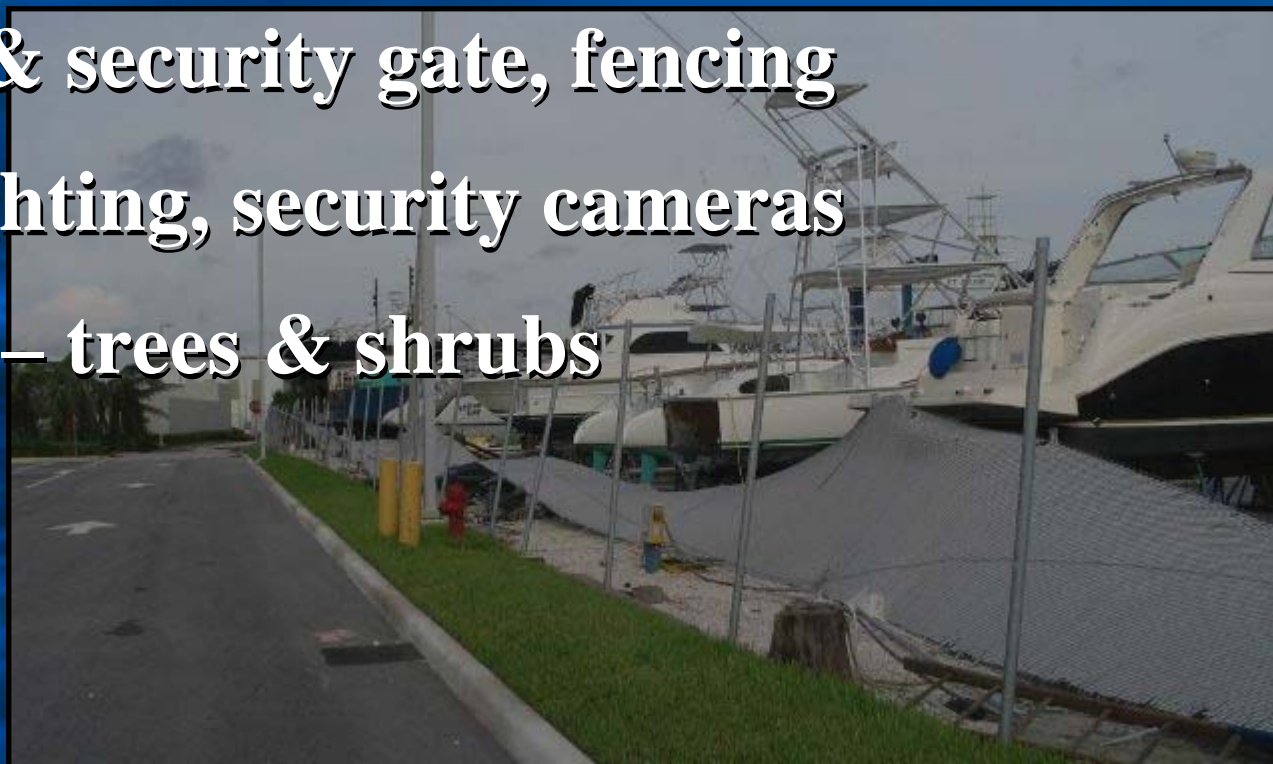
- **Extensive Roof Damages at 7 locations**
 - **Temporary Remediation In Advanced stages**
 - **Engaged Roofing Consultant to initiate the scope for permanent repairs for each roof system**
- **Steel sheeting torn off various warehouses**
- **Overhead doors/loading docks**



Port of Palm Beach

SITE DAMAGES:

- **Fenders, mooring lines**
- **Interchange & security gate, fencing**
- **High mast lighting, security cameras**
- **Landscaping – trees & shrubs**



Port of Palm Beach

REVENUE LOSSES DUE TO FRANCES:

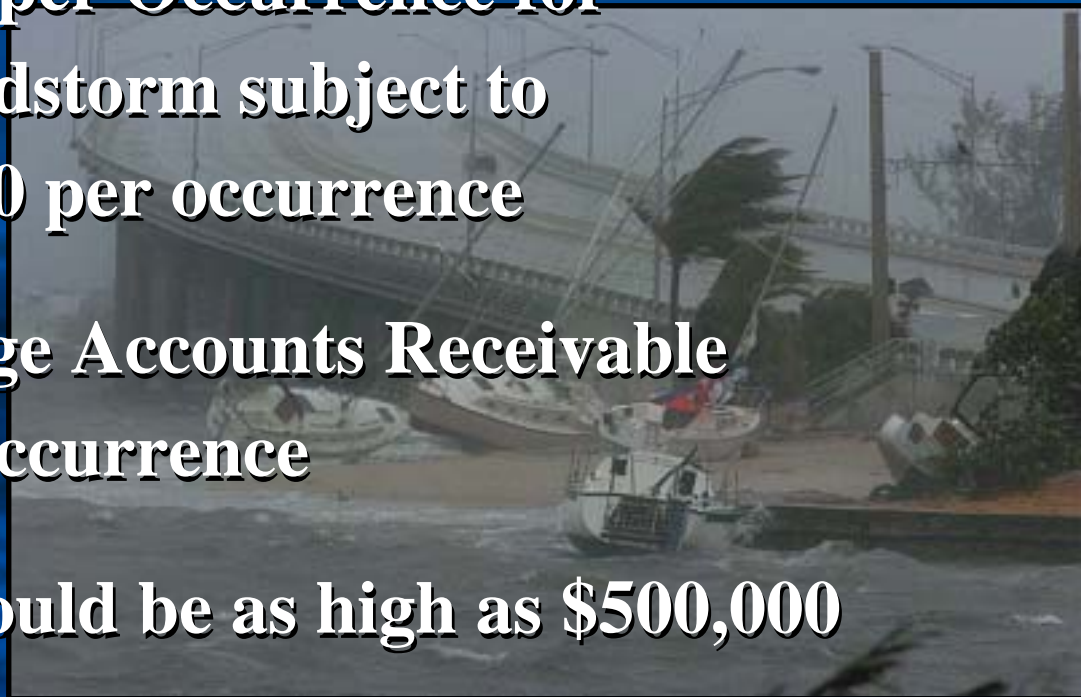
- Dockage, wharfage, harbor master, water, and parking fees
- Diversion of bulk cargo vessels
- Totals \$148,200 through 9/20/04



Port of Palm Beach

INSURANCE COVERAGES:

- **Property and Inland Marine Deductibles – 3% Total Insured Value per Occurrence for “Named Storm” windstorm subject to minimum of \$250,000 per occurrence**
- **Extension of Coverage Accounts Receivable Limit \$250,000 per occurrence**
- **Damage Estimates could be as high as \$500,000**



Contractor's Barge & Tug Grand Cayman



Bahamas



Clifton Pier, Nassau, Bahamas



Enough !



Thank You!



Port of Palm Beach

FEMA MAY COVER:

Insurance Deductible

- **Items Not Covered by Insurance such as labor and overtime costs for Hurricane**

Preparation and Recovery

- **Lost Revenues beyond 2 weeks or until channel is restored to full service levels**
- **Debris Removal and Landscaping**

