

Hurricane Evacuation Study Products from the U.S. Army Corps of Engineers

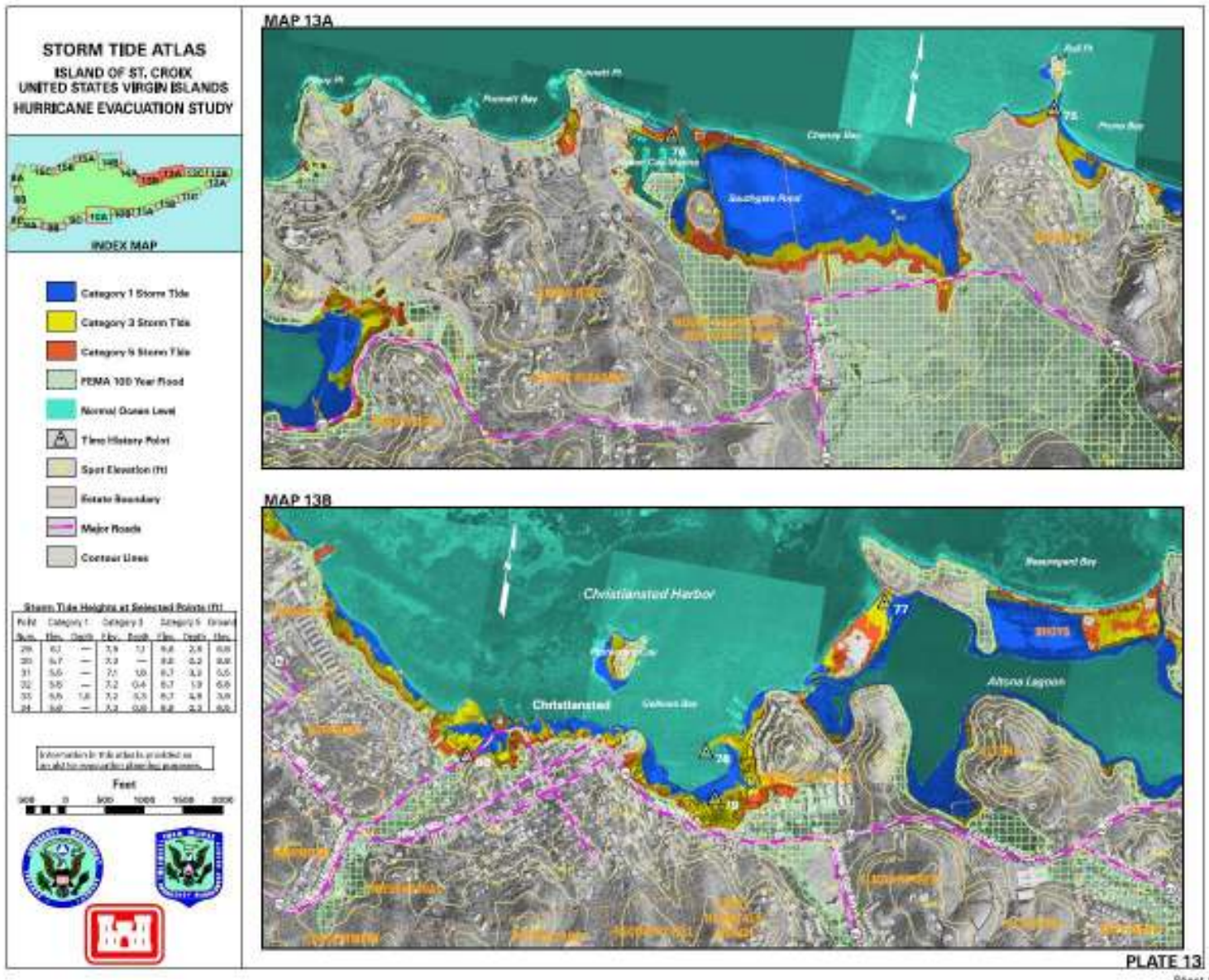
Candida Bronson
Jacksonville District
June 2006

Hurricane Evacuation Studies

- Hazards – Hurricane or Tsunami
- Vulnerability – Flood zones
- Behavior – Likelihood to evacuate
- Shelters – Public or on-their-own
- Transportation
- Coordination

Hurricane Evacuation Studies

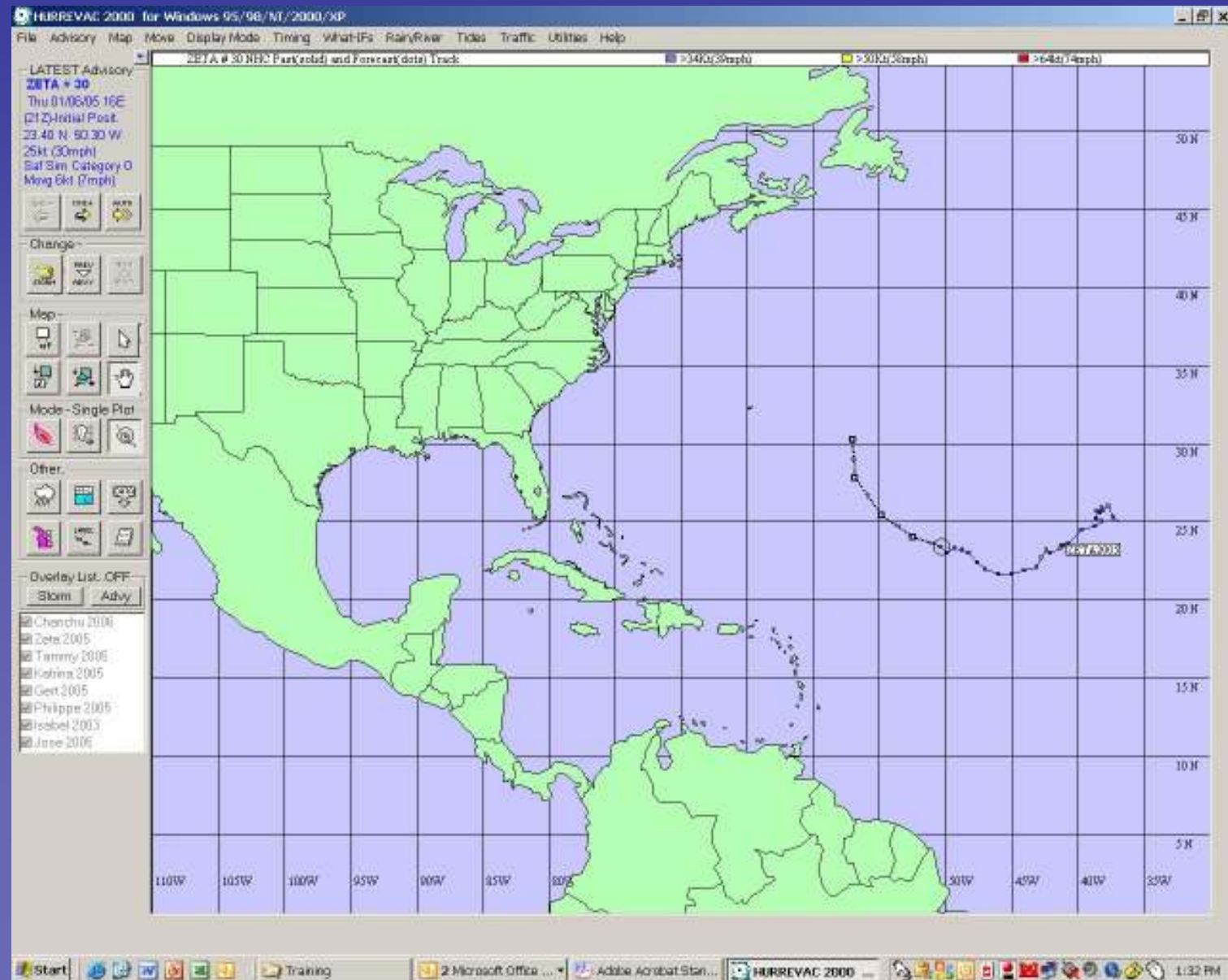
Storm Tide Atlas



Hurrevac Overview

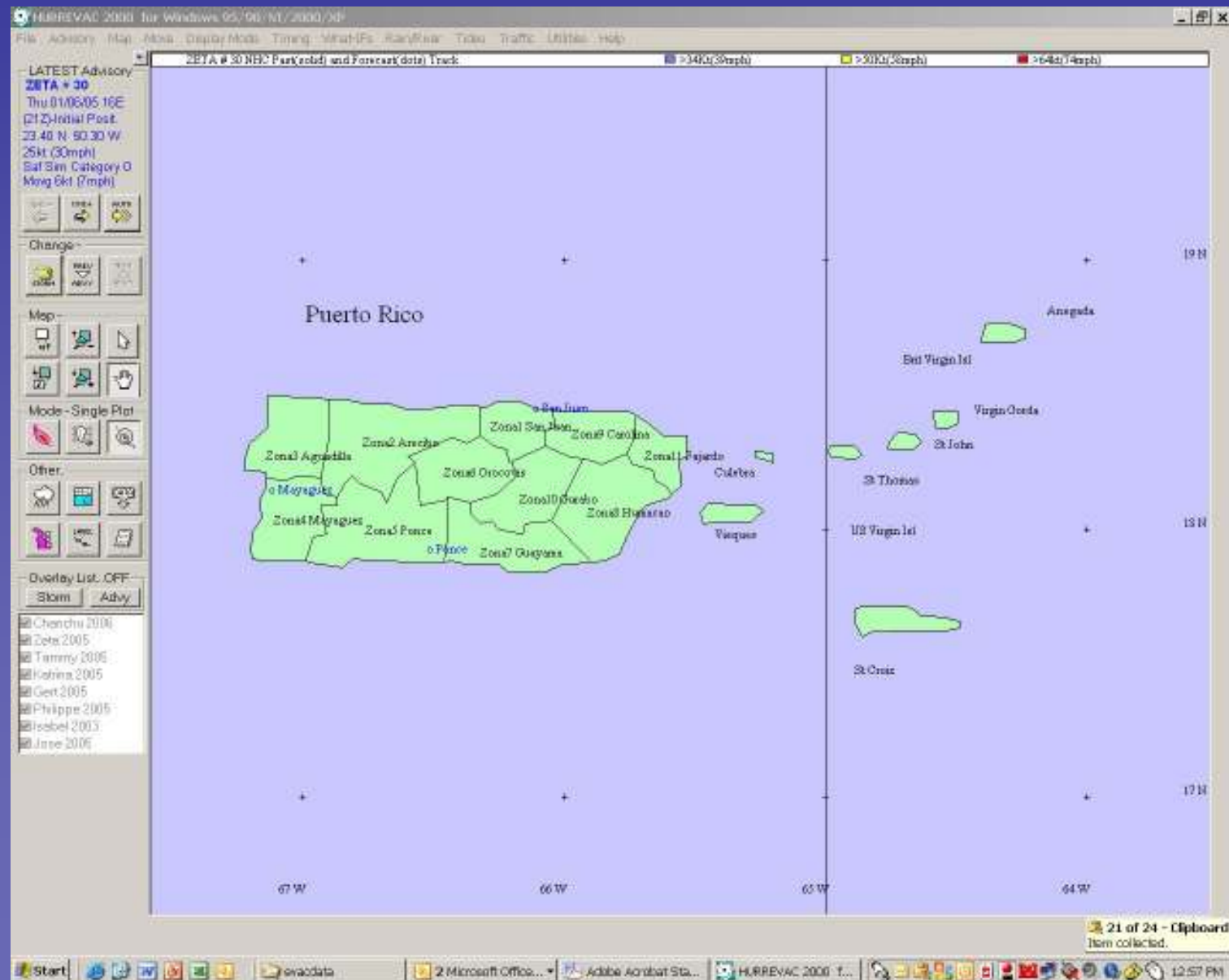
Hurrevac Features

- Base Map
- Windows driven
- Menus and buttons



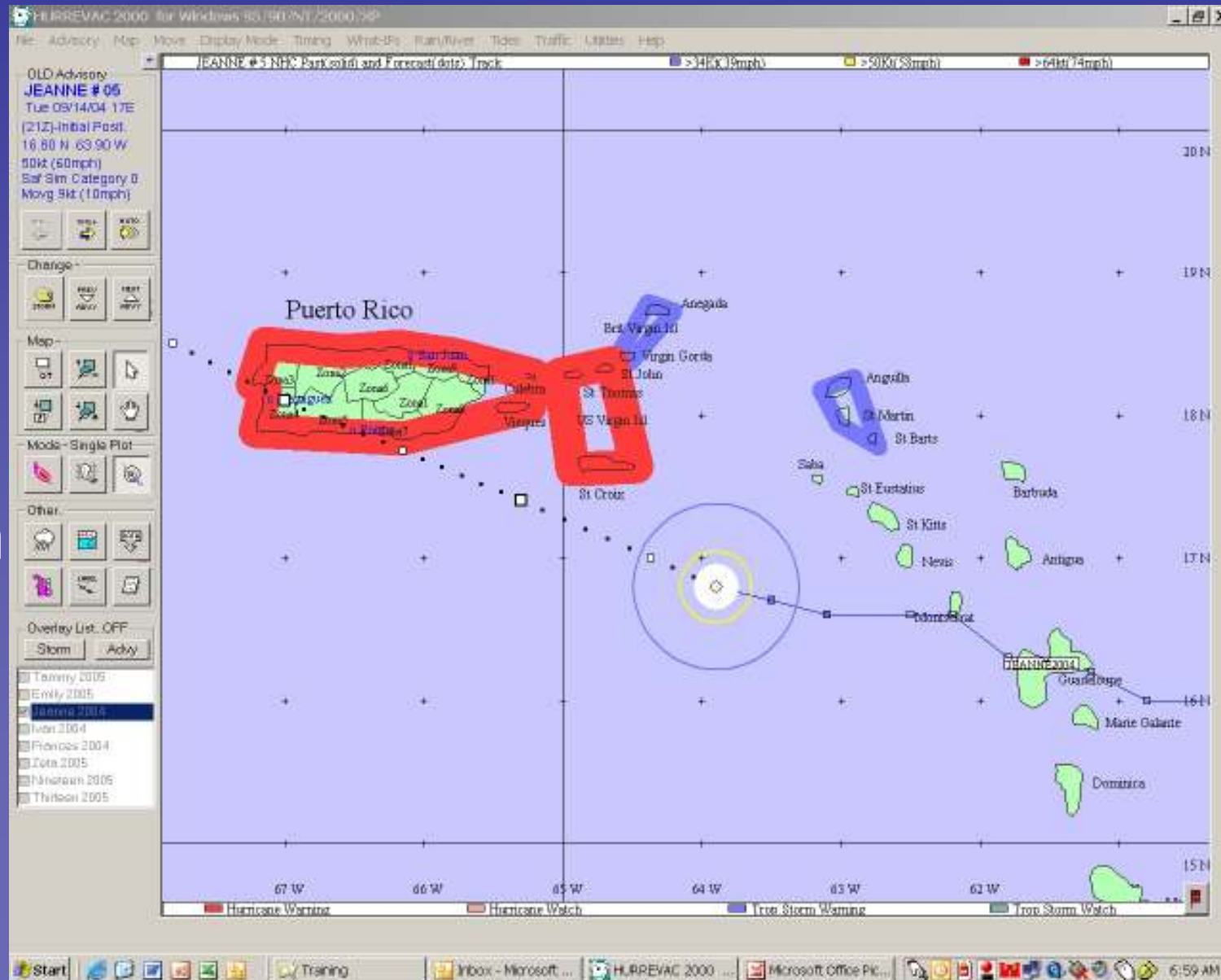
Hurrevac Features

- U.S. Territorial Islands



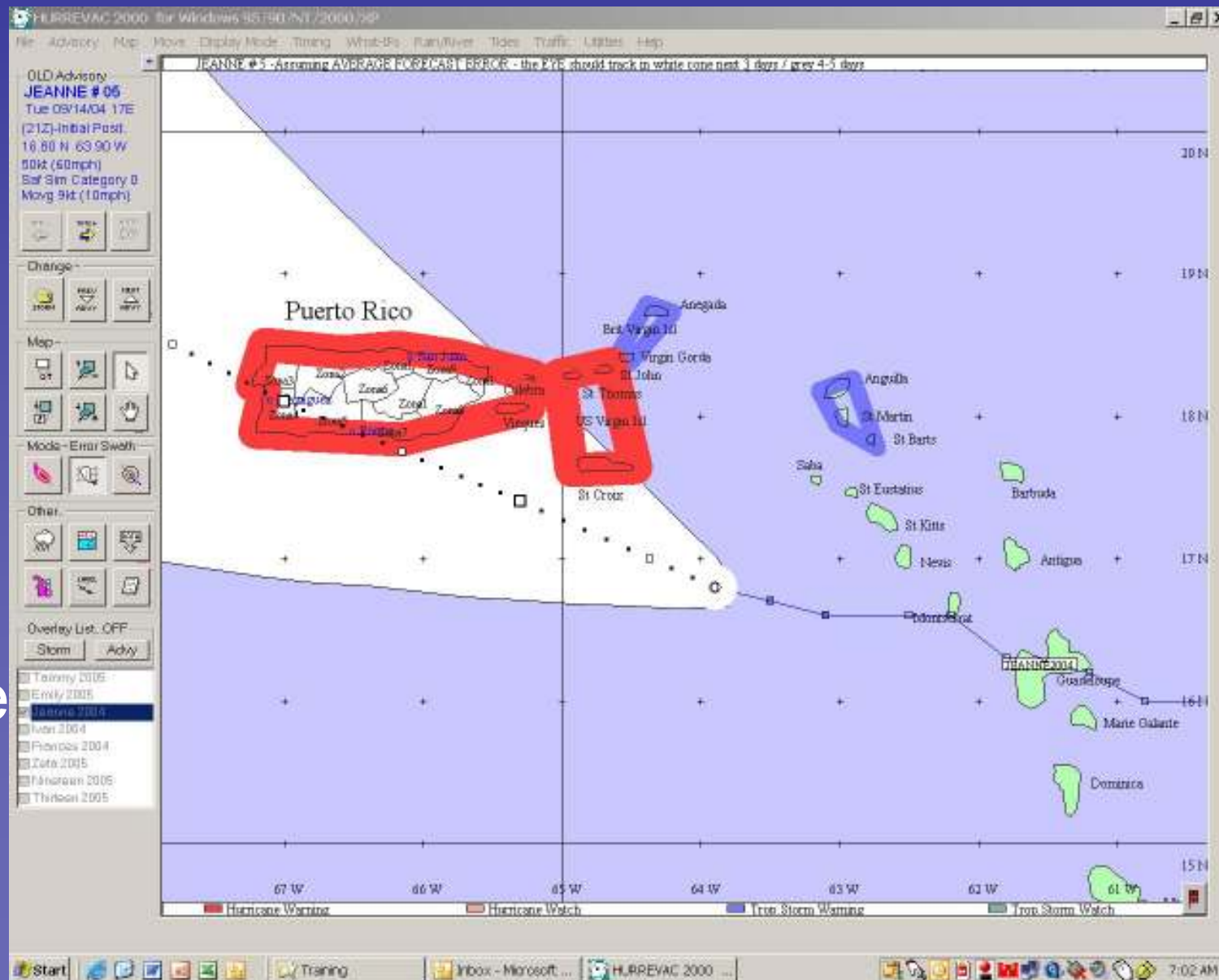
Hurrevac Features

- Hurricane warnings
- Forecasted track
- Wind swath



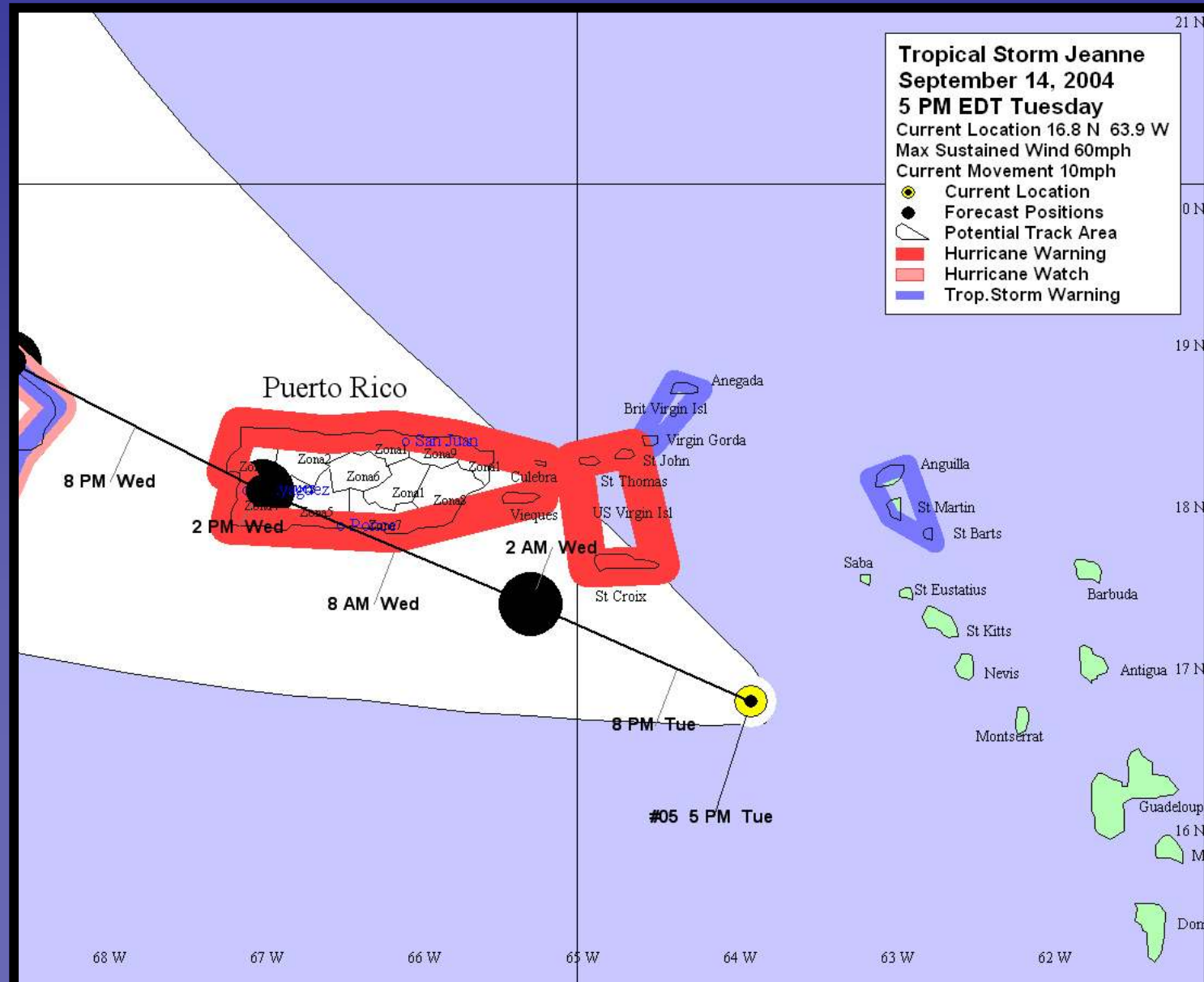
Hurrevac Features

- Hurricane warnings
- Forecasted track with cone of error
- Shows zone of potential landfall



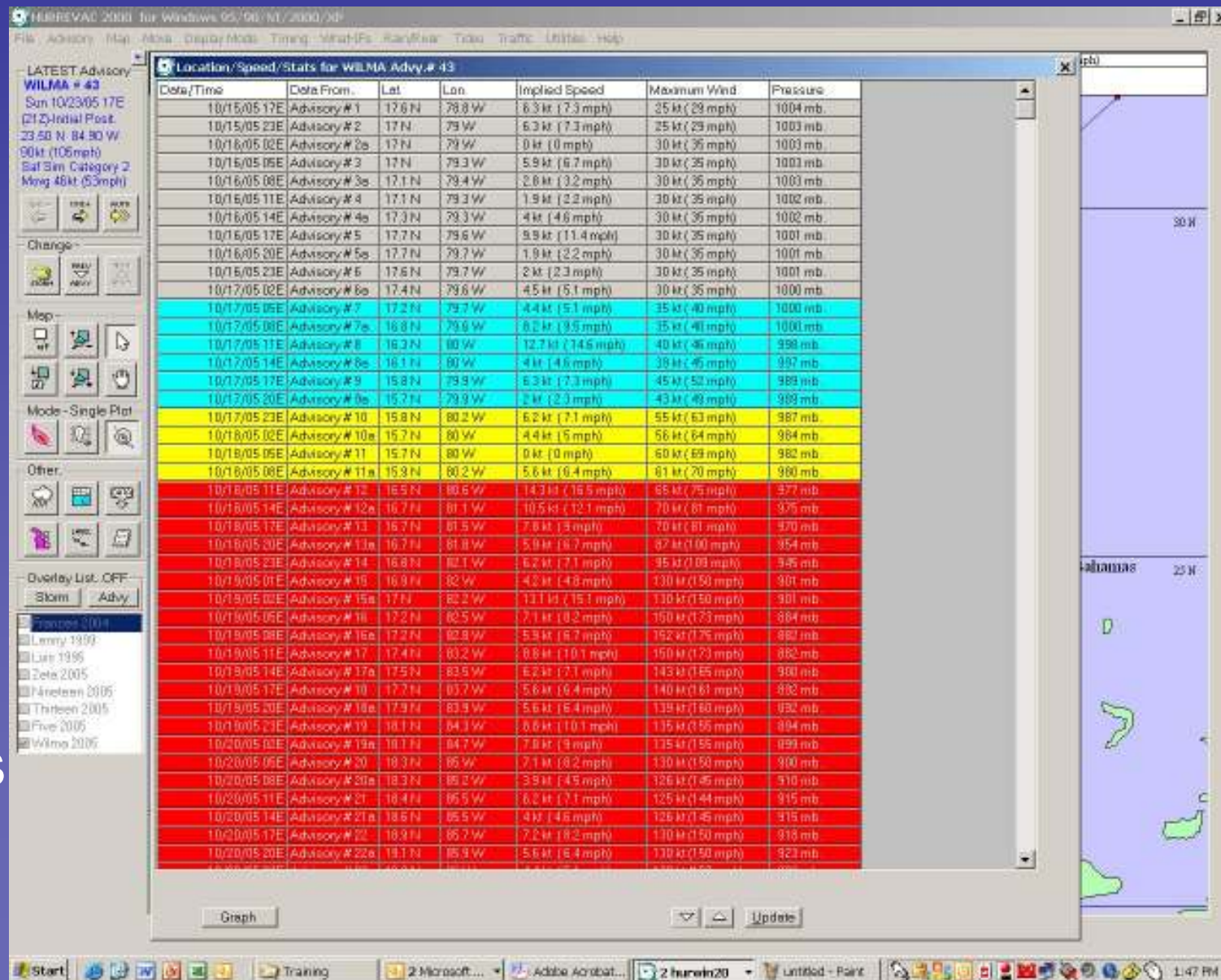
Hurrevac Features

- Graphics Package for reports or presentations



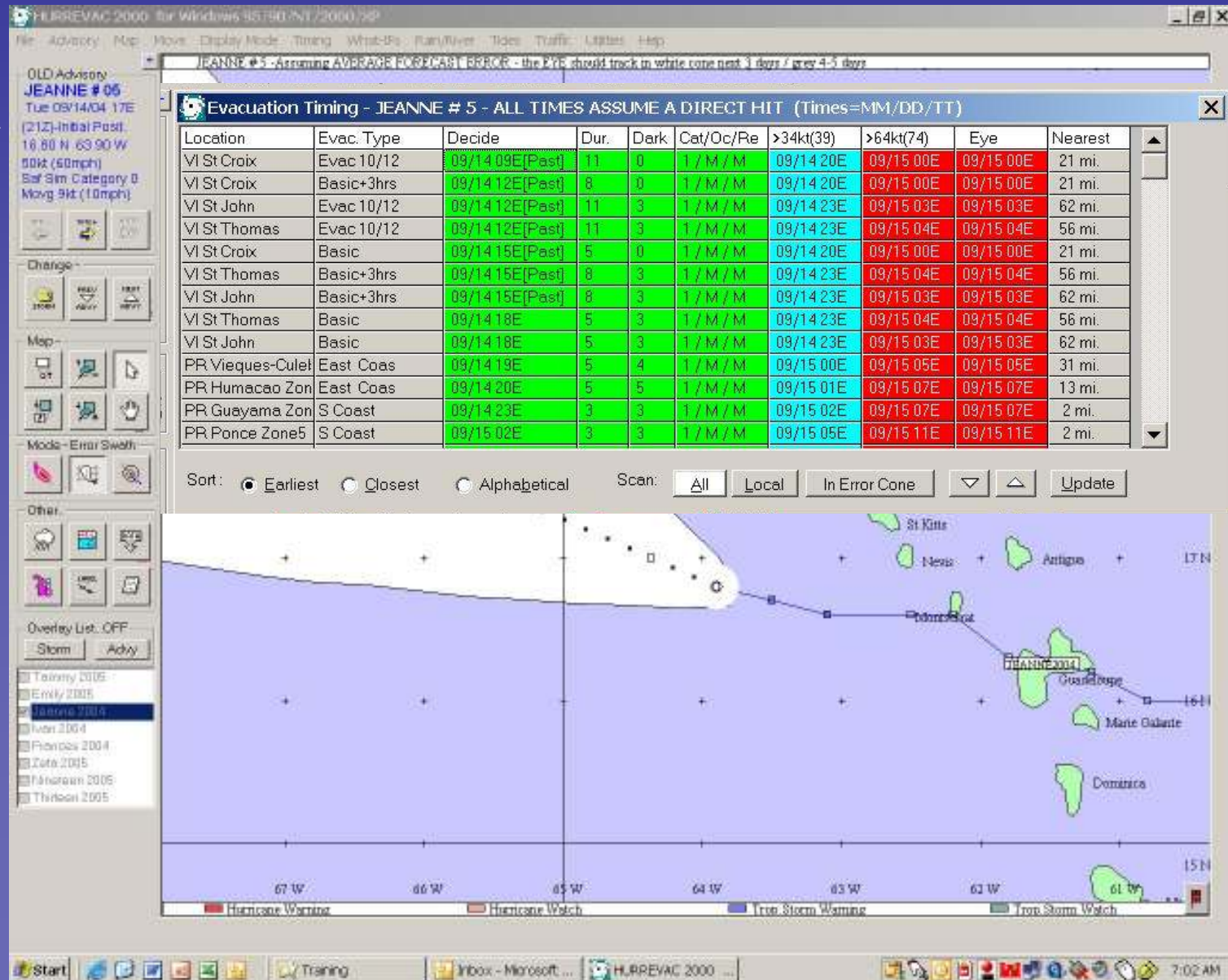
Hurrevac Features

- Tabular Data
- For each advisory
 - position
 - forward speed
 - max winds
 - pressure



Hurrevac Features

- Tabular Data
- Evacuation timing by area
- Shows distance to track and hour as the storm approaches



Hurrevac Features

- Shelter Input Fields

The screenshot displays the HURREVAC 2000 software interface. The main window shows a map of the Florida Gulf Coast with a hurricane track for Wilma #41. A 'Shelters for FL BAY' dialog box is open, allowing for the input and management of shelter data.

Shelters for FL BAY

COUNTY/ PARISH (file): FL005 SHL - FL Bay

Open Closed Current Population: 195

Shelter 1 of 10

Facility Name: CAINHOY MIDDLE SCHOOL

Street Address: 12105 Bay St

City / Town / ZIP: Anytown FL 29464

Phone: 912-222-2222

Contact Name: Joe Brown

Phone Business: 912-333-3333

Phone Home: 912-444-4444

Facility Information

Capacity	Elevation	Sq. Ft.	Floors	ARC
210	10	4000	2	NO

Hazards (Vulnerable to):

Facilities Available:

Special Needs:

Registrations

Category	Value
New	0
Prev. Total	2
Total to Date	2

Meals

Category	Value
This Period	0
Prev. Total	7
Total to Date	7

Staff

Category	Value
Am. Red Cross	0
Social Svcs	2
Volunteers	4
School Staff	1
Security/Other	1
TOTAL	16

Current Status

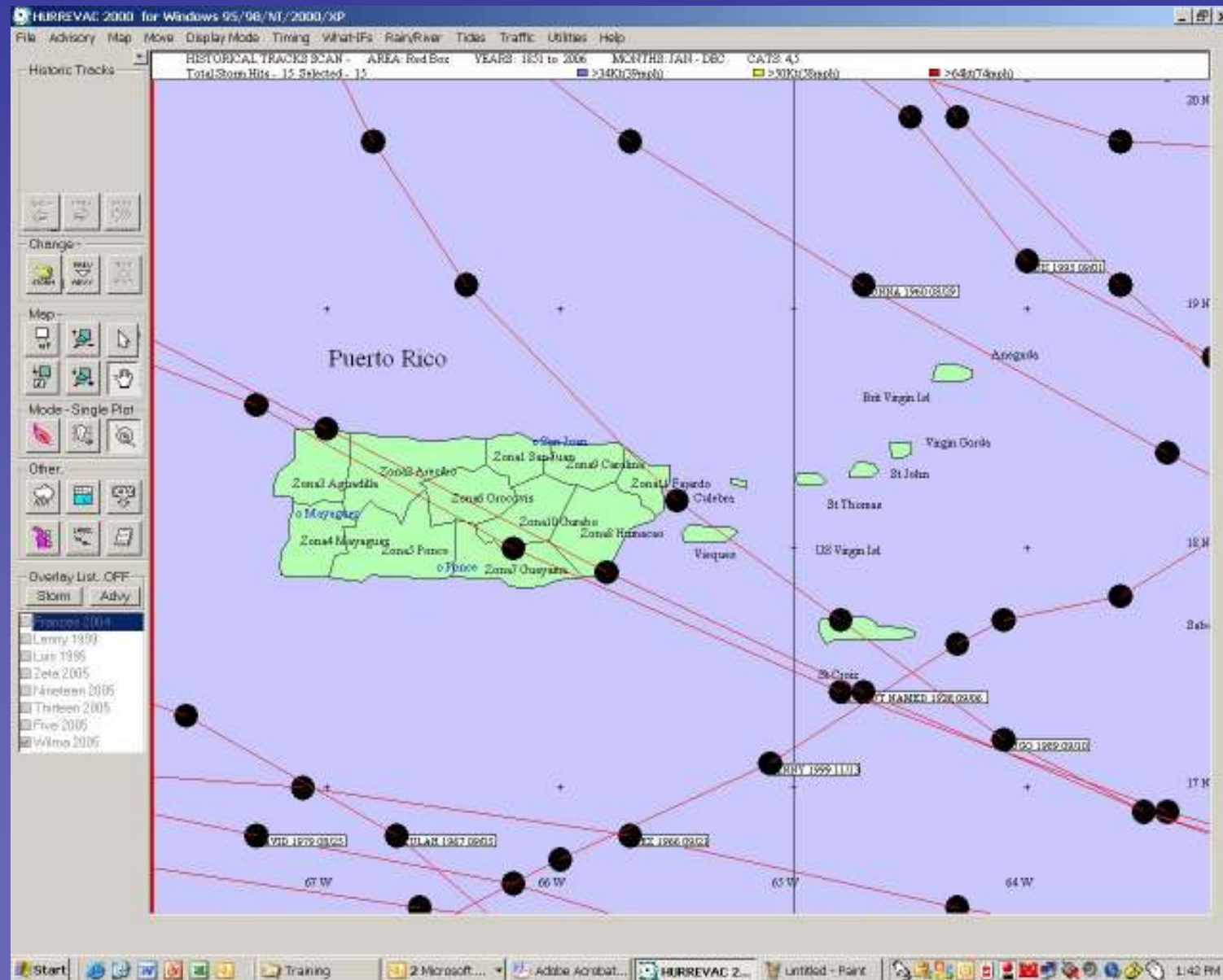
	This Shelter	Open Shelters	ALL Shelters
Population	195	493	538
Capacity	210	1431	1566
Percent Full	93 %	34 %	36 %

8 of the 10 Shelters are Open.

Buttons: ADD New-County File, ADD Shelter to this file, DELETE This Shelter, Status List, Print Reports, Cancel, OK

Hurrevac Features

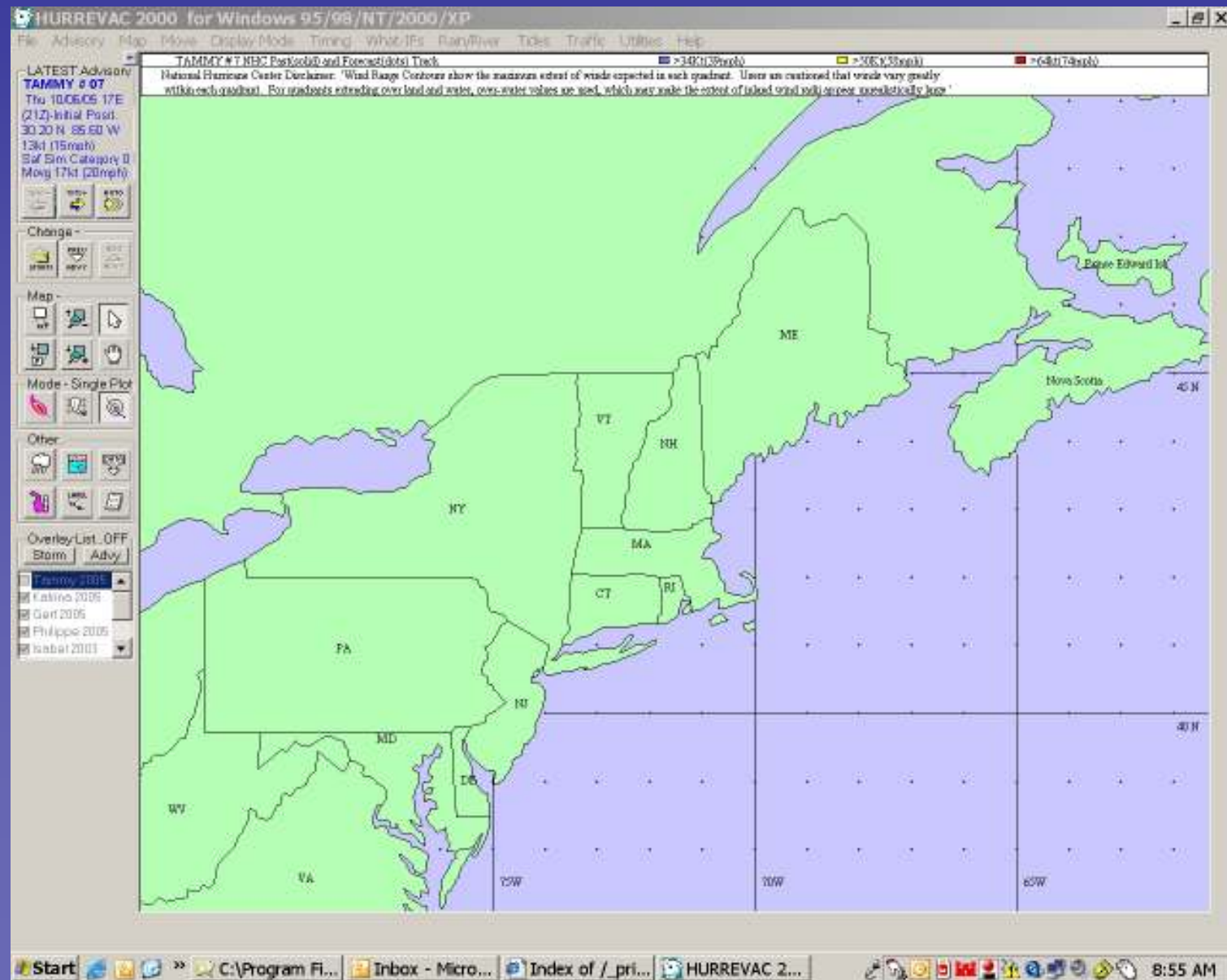
- Historical Hurricane Queries



Hurrevac Features

National Weather Service Information

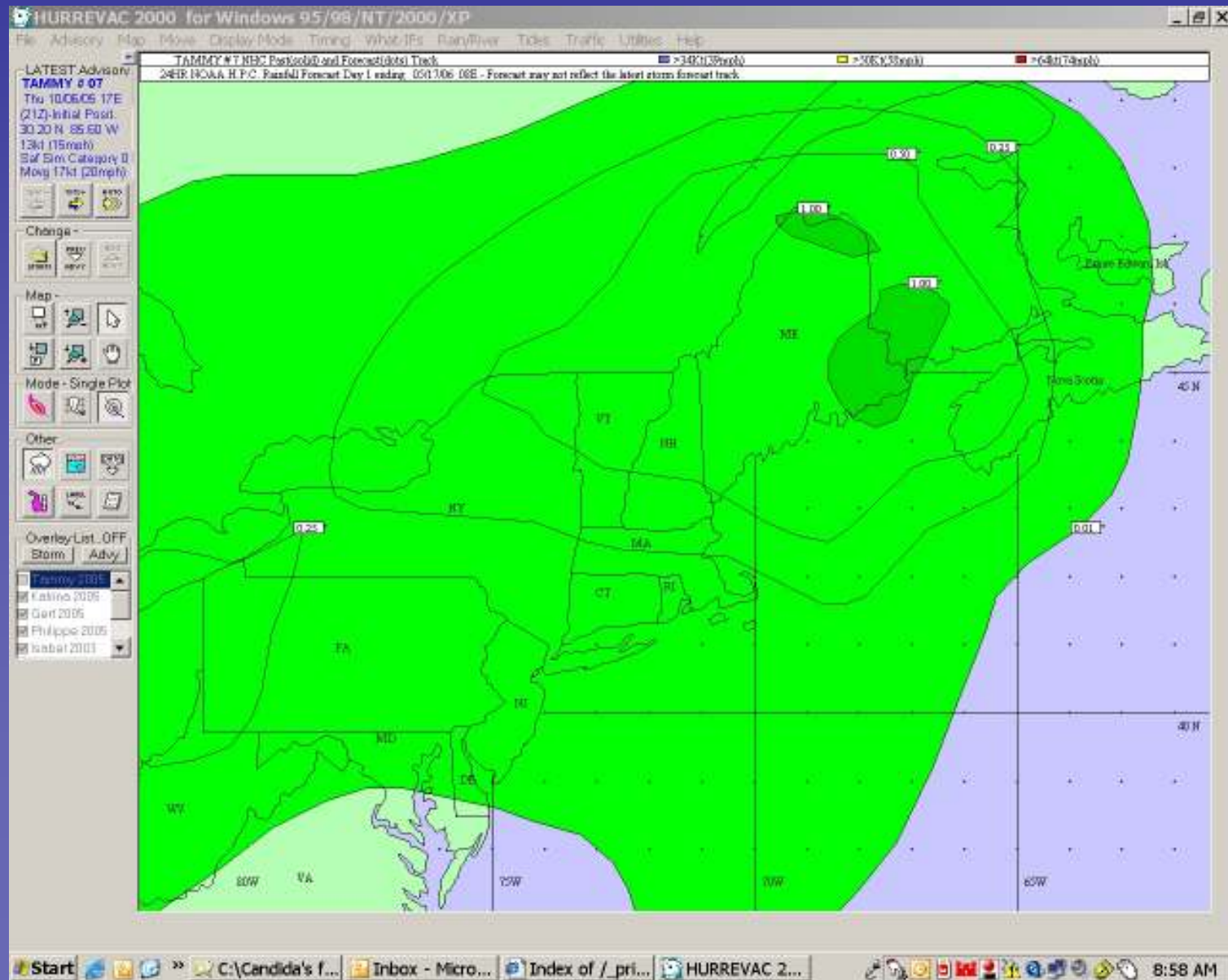
- New England May 2006



Hurrevac Features

National Weather Service Information

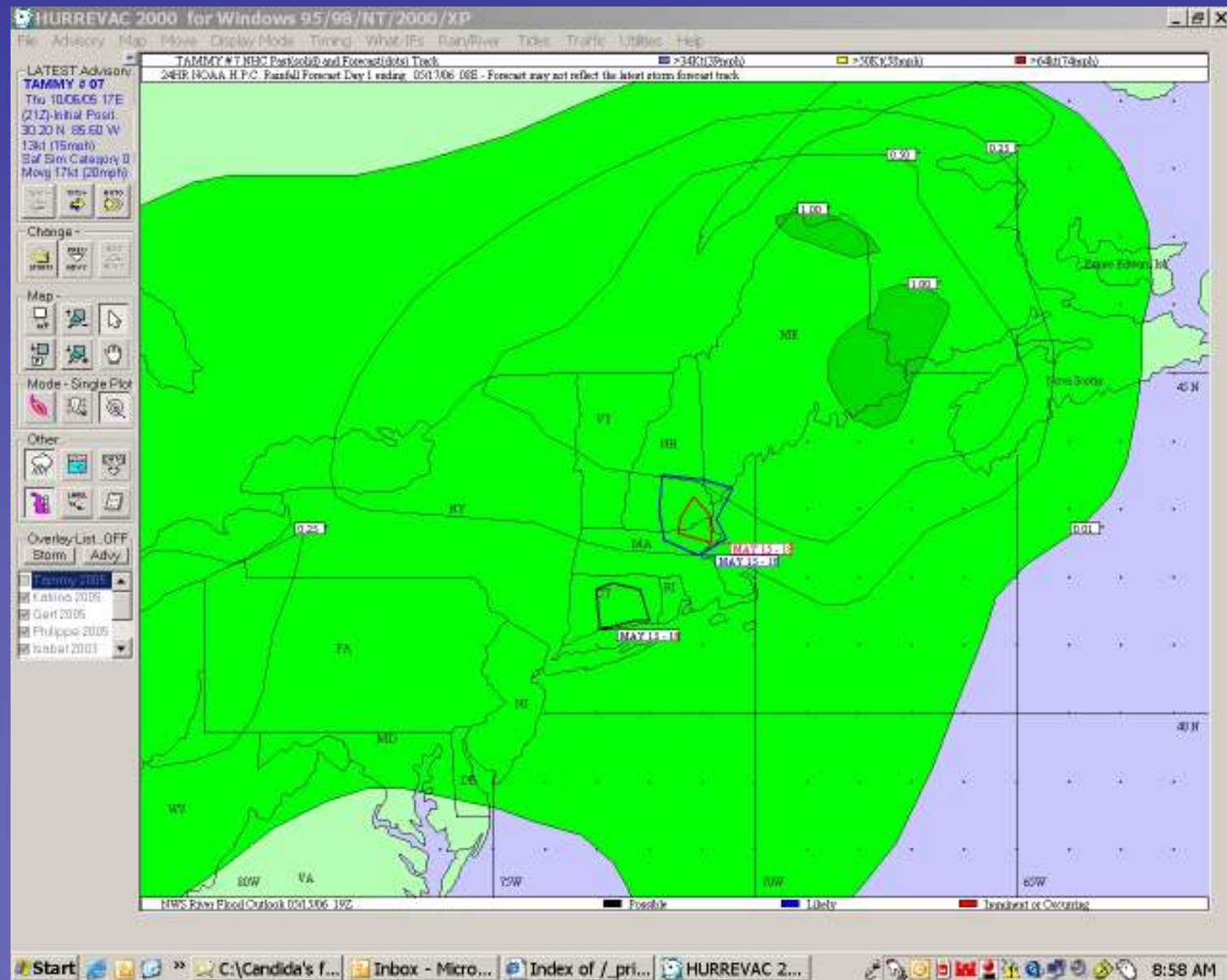
- New England May 2006
- Turn on rain forecast



Hurrevac Features

National Weather Service Information

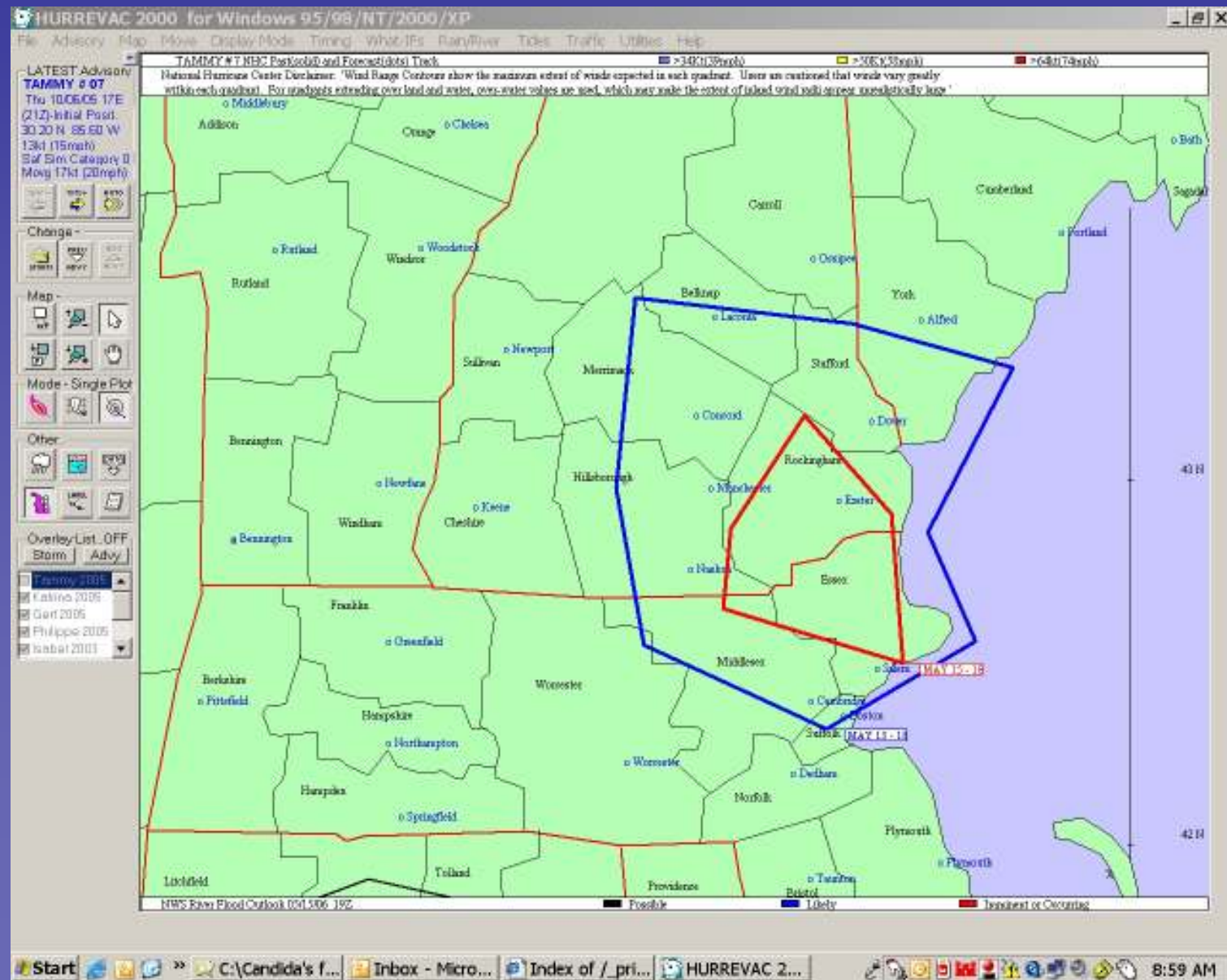
- New England May 2006
- Turn on rain forecast
- Turn on flood forecast



Hurrevac Features

National Weather Service Information

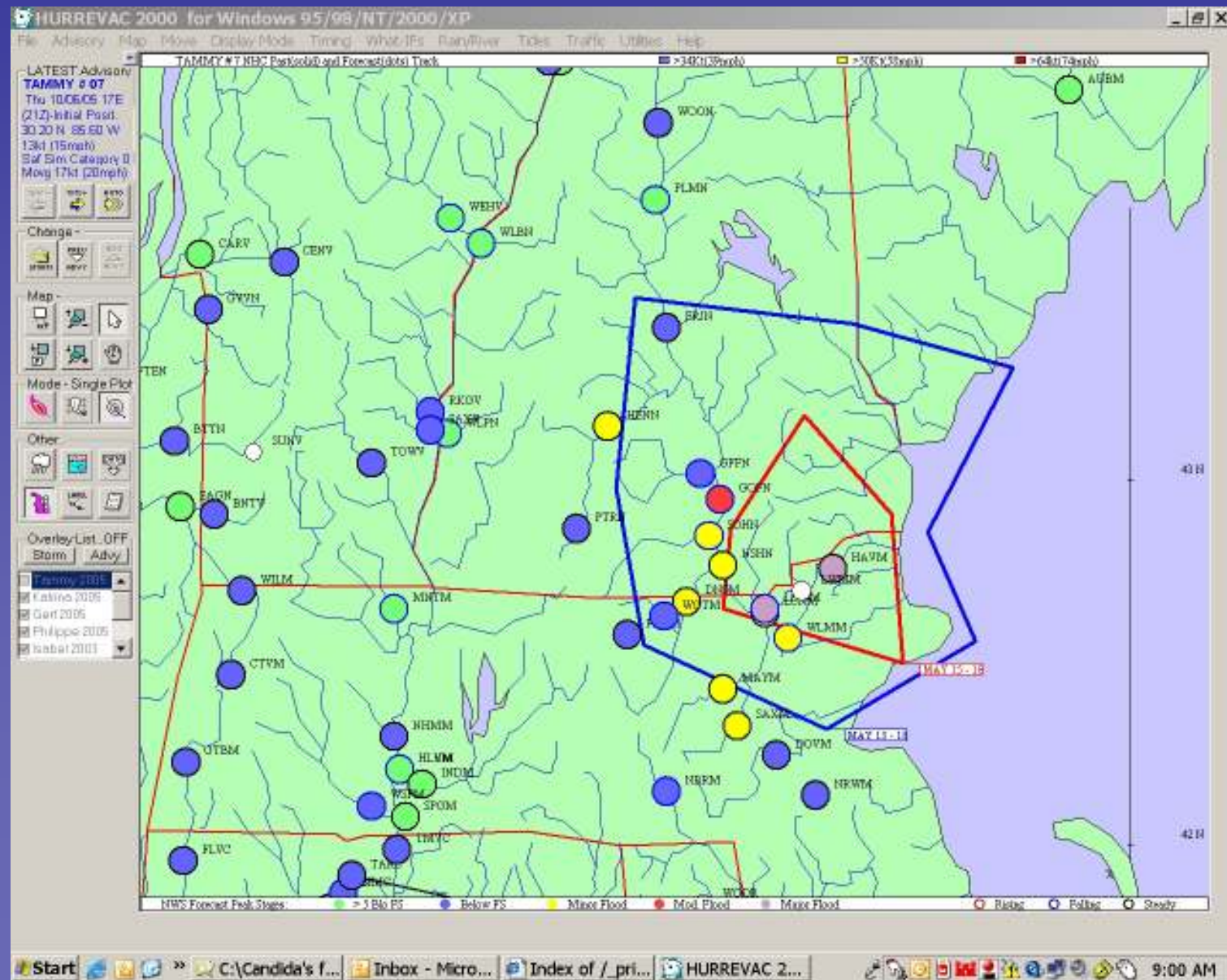
- Zoom in on flood area



Hurrevac Features

National Weather Service Information

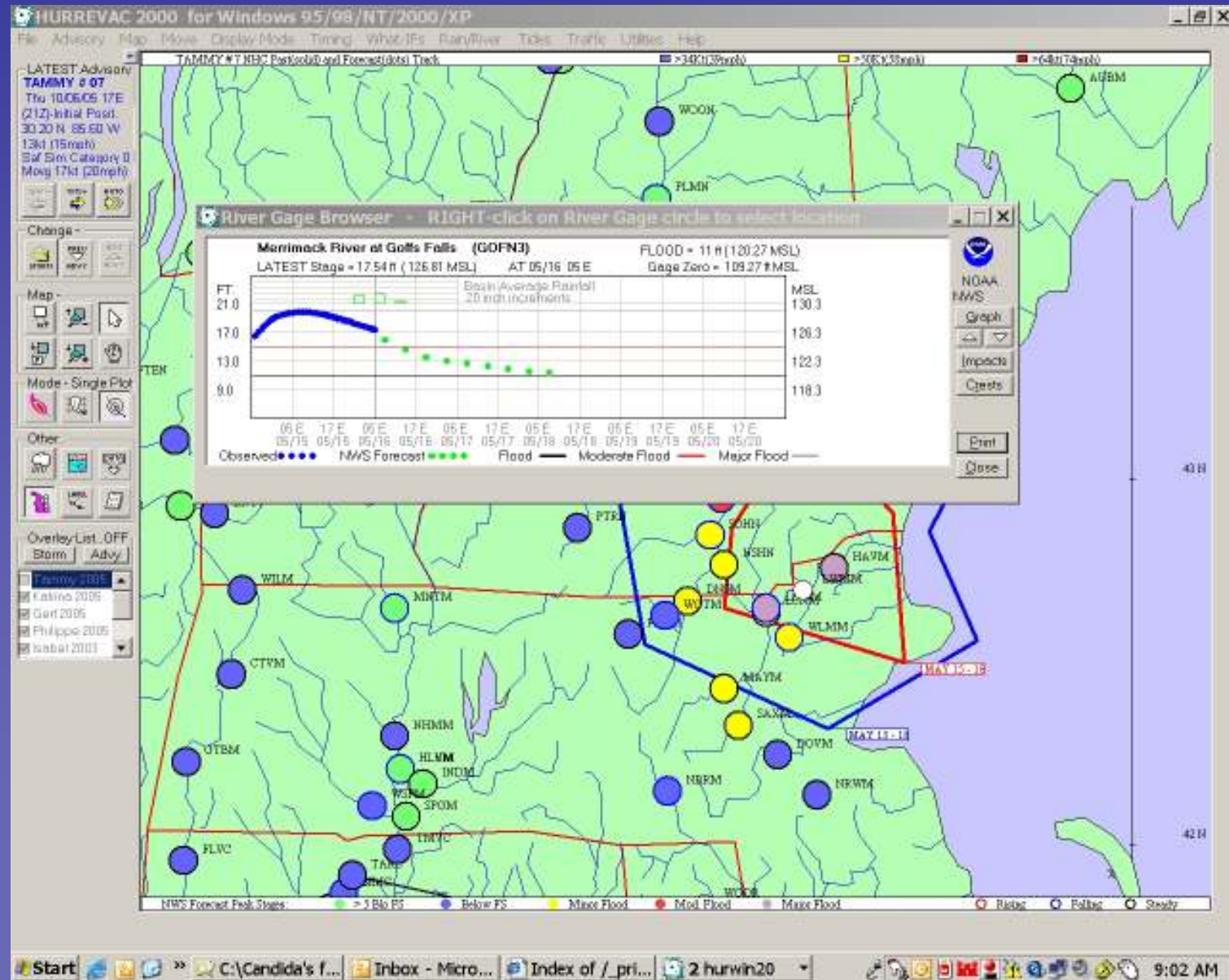
- Zoom in on flood area
- Turn on river gages



Hurrevac Features

National Weather Service Information

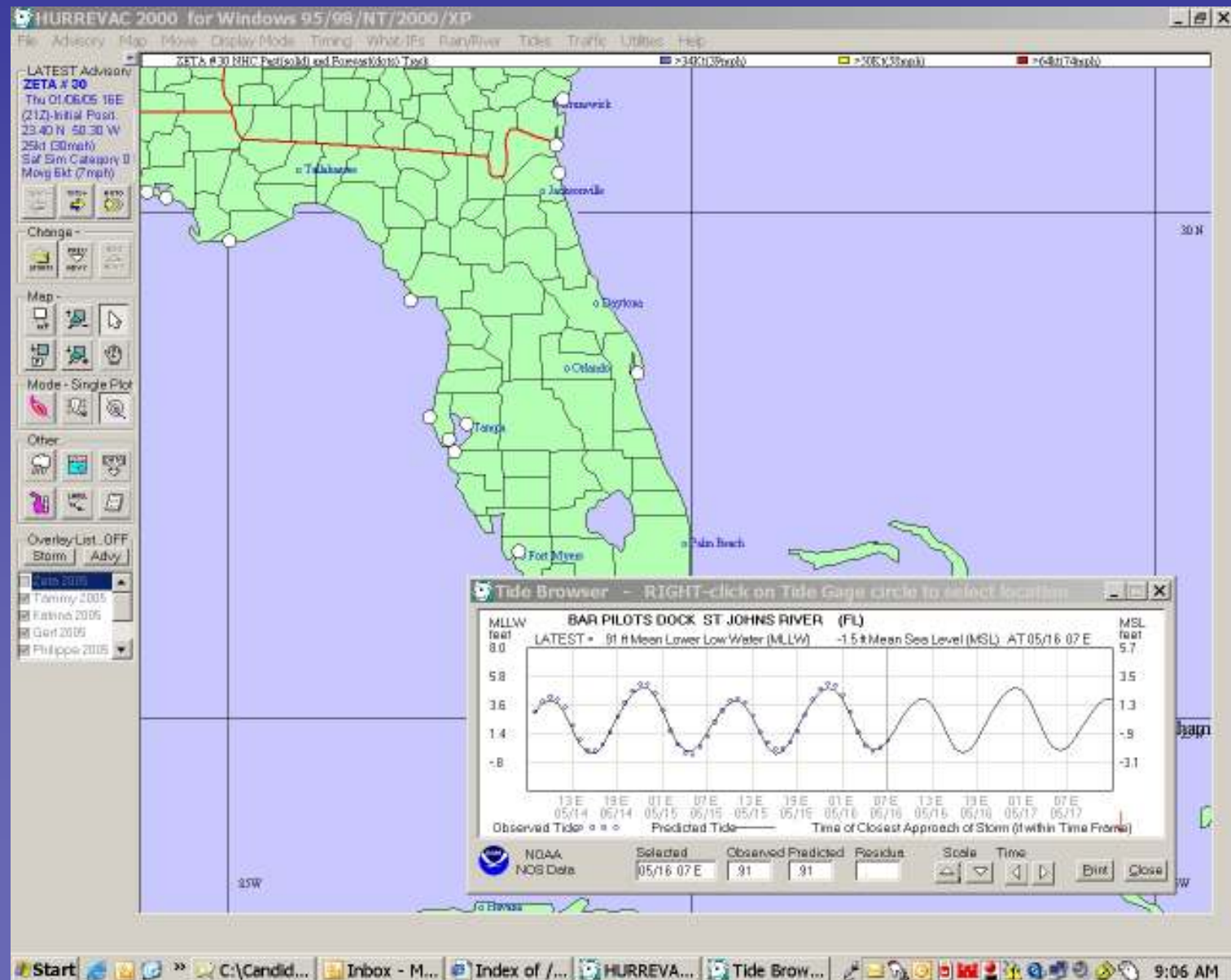
- Zoom in on flood area
- Turn on river gages
- View river stage graph



Hurrevac Features

National Weather Service Information

- NOAA Tide Gages
- Right now just mainland U.S.



Hurrevac and GIS

- Export to shapefile

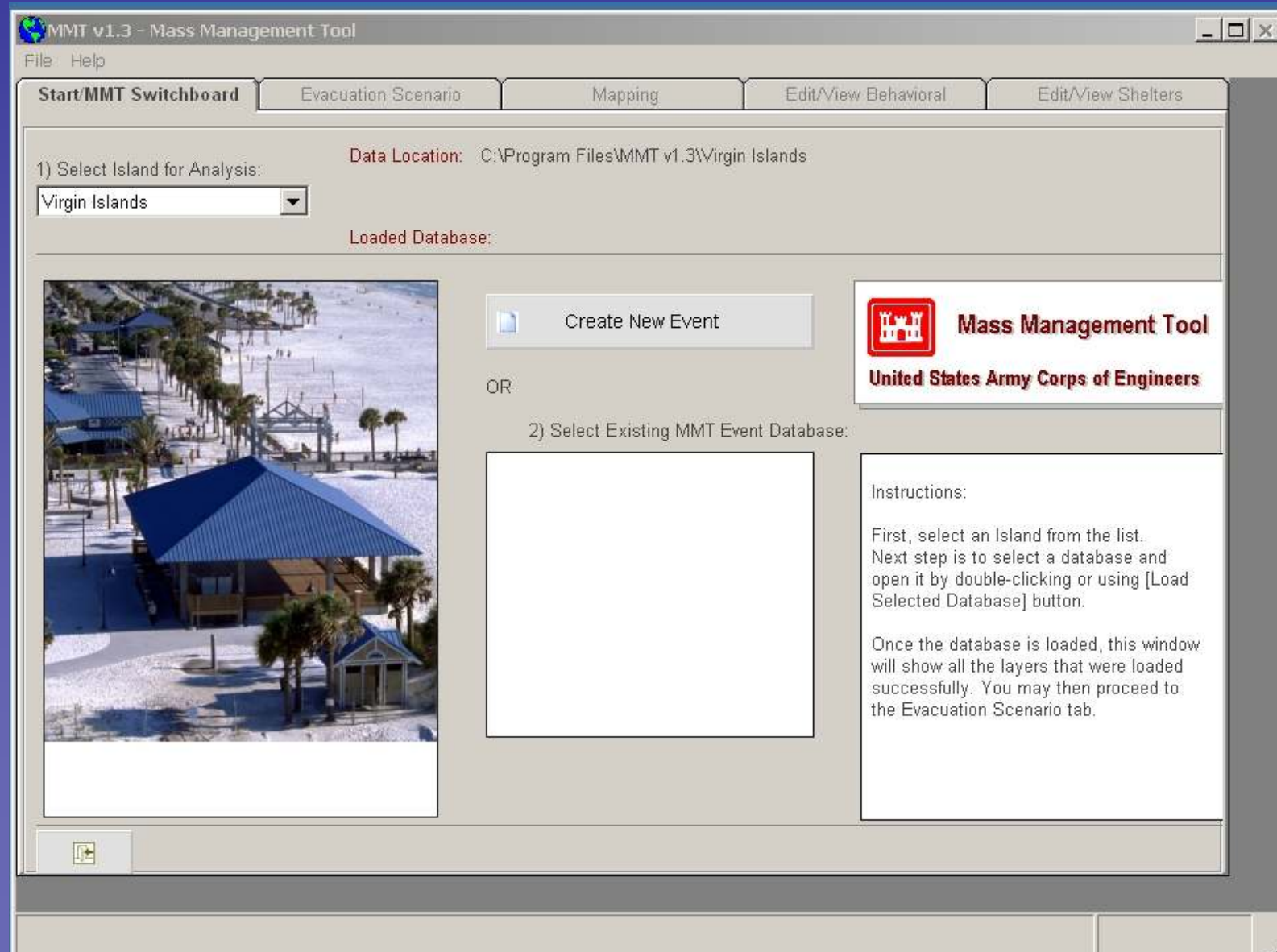
Hurrevac Information

- Available to U.S. Government Agencies
- Handout
- www.hurrevac.com

Mass Management Tool Overview

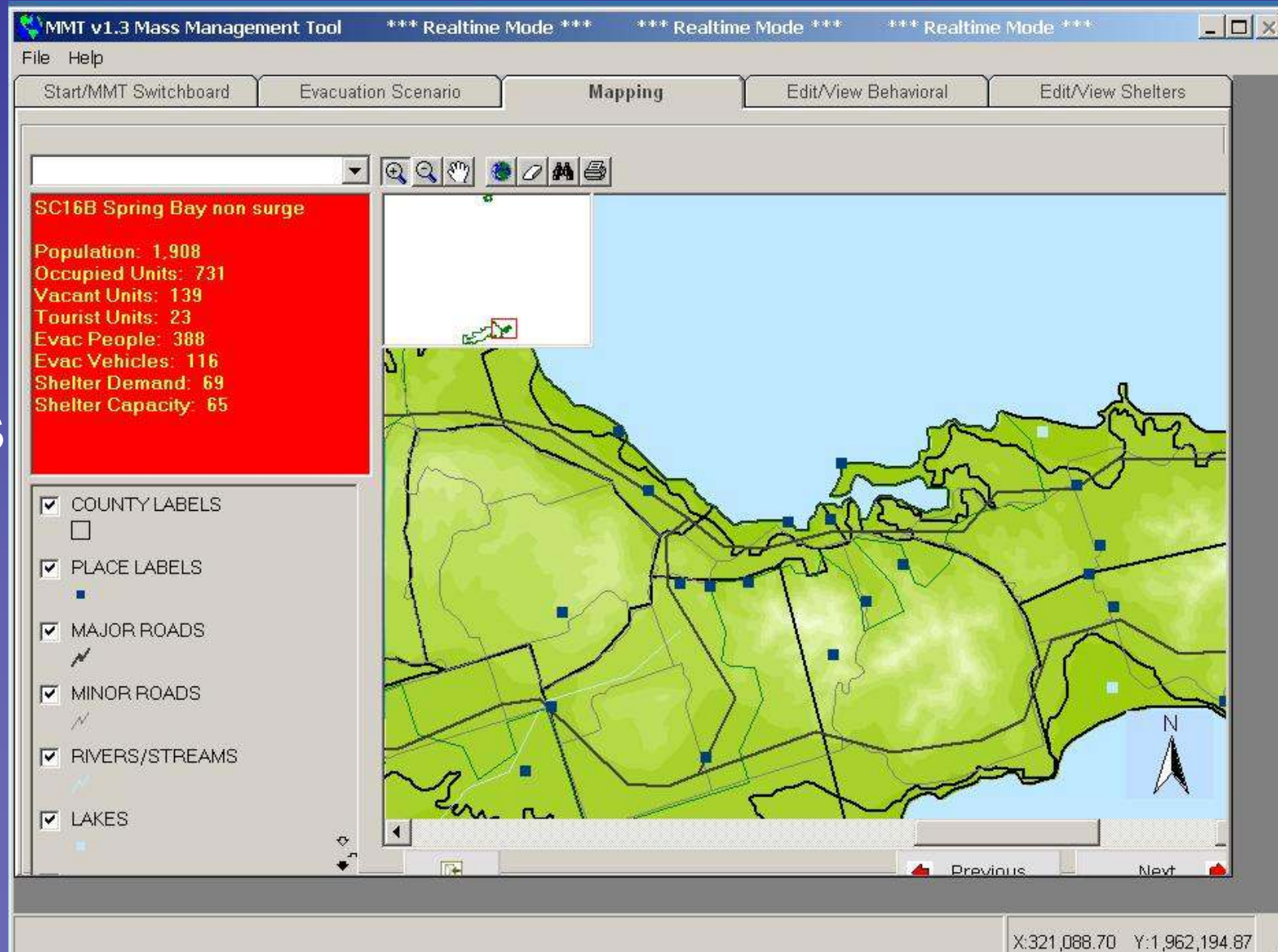
Mass Management Tool

- Opening View
- Pulls from a master database
- Allows scenarios



Mass Management Tool

- Map View
- Scroll over coastal regions to see Census data and status



Mass Management Tool

- Shelter View
- Open and close shelters
- Then return to map to see effects

The screenshot displays the 'Mass Management Tool' (MMT v1.3) in 'Realtime Mode'. The interface includes a menu bar (File, Help) and several tabs: 'Start/MMT Switchboard', 'Evacuation Scenario', 'Mapping', 'Edit/View Behavioral', and 'Edit/View Shelters'. The 'Edit/View Shelters' tab is active, showing a summary for 'Open Shelters' with a count of 2 and a total capacity of 1100. Below this is a table titled 'Shelter Information' with columns for Shelter Name, Locations, Parking Spaces, Is Open, Capacity, Actual Use, and Use %.

Shelter Name	Locations	Parking Spaces	Is Open	Capacity	Actual Use	Use %
SC - East	1	0	No	750	0	0
SC - Inland East	1	0	No	400	0	0
SC - Inland North	1	0	No	750	0	0
SC - Inland South	1	0	Yes	600	0	0
SC - Inland West	1	0	Yes	500	0	0
SC - North	1	0	No	400	0	0
SC - South	1	0	No	400	0	0
SC - West	1	0	No	400	0	0
SJ - St John	1	0	No	655	0	0
ST - Blue Water Bible College	1	0	No	200	0	0
ST - Charlotte Amalie High School	1	0	No	550	0	0
ST - Ivanna Eudora Kean H.S.	1	0	No	450	0	0
ST - Joseph Sibilly School	1	0	No	185	0	0
ST - Nisky Moravian School	1	0	No	100	0	0
ST - Savan Comm Cntr	1	0	No	50	0	0
ST - Seventh Day Adv School	1	0	No	320	0	0
ST - St Ann's Church	1	0	No	65	0	0

At the bottom of the window, there is a status bar with the text 'Select the required cell in the [Is Open] column and double-click to alternate Shelter Open status'. Below this are three buttons: a small icon button, an 'Apply' button with a green checkmark, and a 'Previous' button with a red arrow.

X:322,593.58 Y:1,967,853.21

Mass Management System Overview

Mass Management System

- Conceptual Design for a new System
- Tie together several programs
 - Storm Tide Atlas
 - Hurrevac
 - Mass Management Tool
 - ETIS
 - ARMOR
- Planning into the Future

A satellite image of a large hurricane over the Gulf of Mexico. The hurricane's eye is clearly visible in the center, surrounded by dense, swirling cloud bands. The surrounding ocean is dark blue, and the landmasses of North and Central America are visible in green and brown. The text "Thank You" is overlaid in yellow in the upper-middle part of the image.

Thank You

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