



THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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Assistant Secretary of Commerce for Environmental Observation & Prediction

National Oceanic & Atmospheric Administration | NOAA

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NOAA 101

NOAA'S MISSION: Science, Service, and Stewardship

*To understand and predict
changes in climate, weather,
oceans, and coasts,*

*To share that knowledge and
information with others, and*

*To conserve and manage
coastal and marine
ecosystems and resources.*

SCIENCE



SERVICE

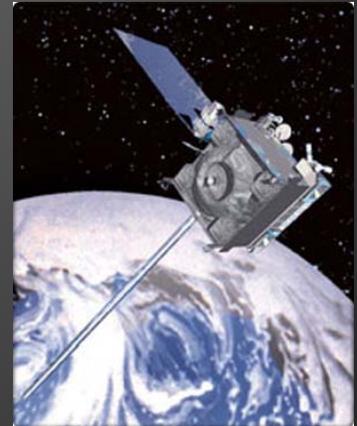


STEWARDSHIP



National Primary Mission Essential Functions

Collect and provide the Nation with intelligence data, imagery, and other essential information for predictive environmental and atmospheric modeling systems and space-based distress alert systems by operating NOAA-controlled satellites, communications equipment, and associated systems



Provide the Nation with environmental forecasts, warnings, data, and expertise critical to public safety, disaster preparedness, all-hazards response and recovery, the national transportation system, safe navigation, and the protection of the Nation's critical infrastructure and natural resources



NOAA = Critical Environmental Intelligence



CNN Interview with Wolf Blitzer



NHC Director Bill Read Briefing FEMA



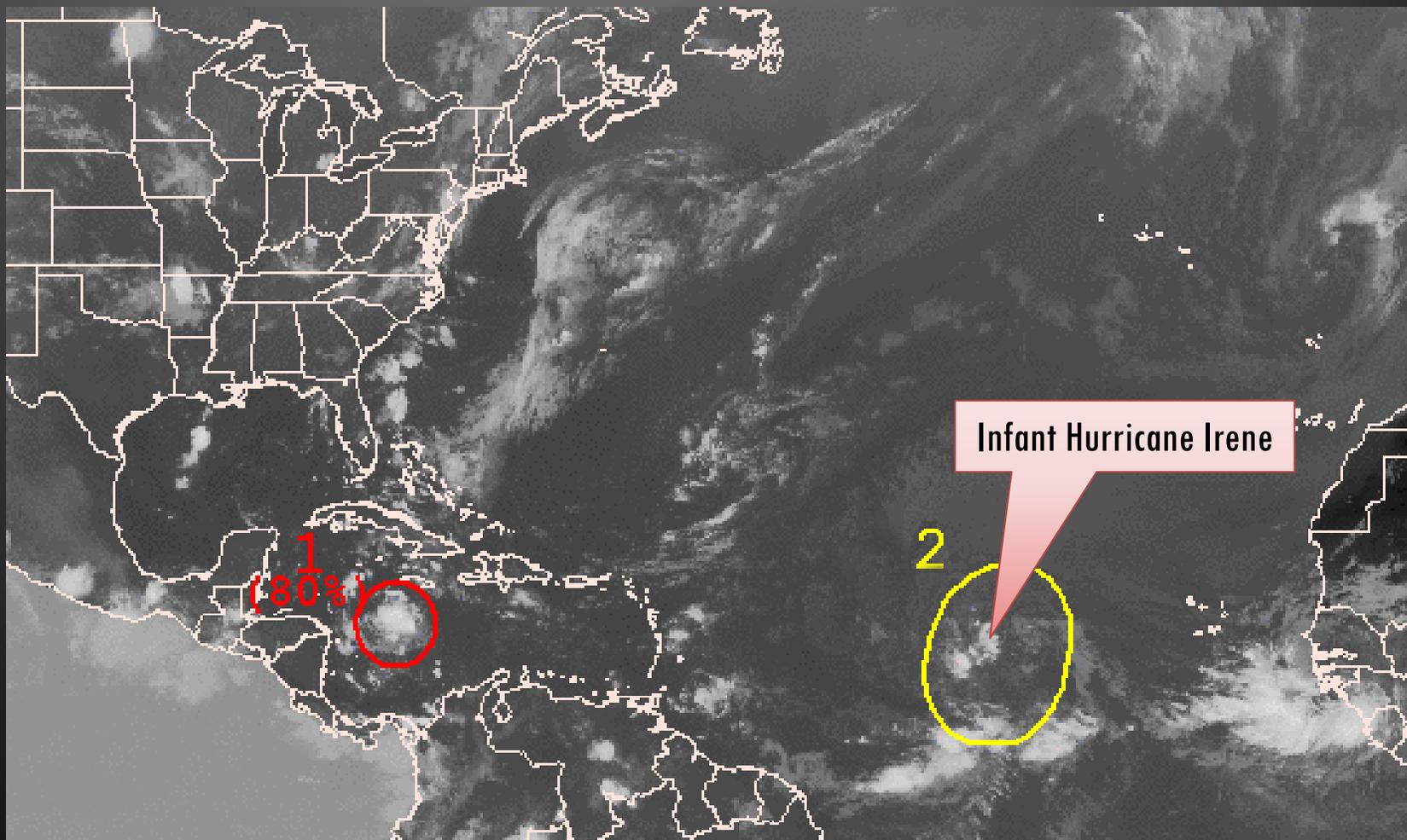
NWS Forecasters Embedded in Emergency Operations Center



The Hurricane Irene Example

First
Sign of
Irene

9 days
before
landfall



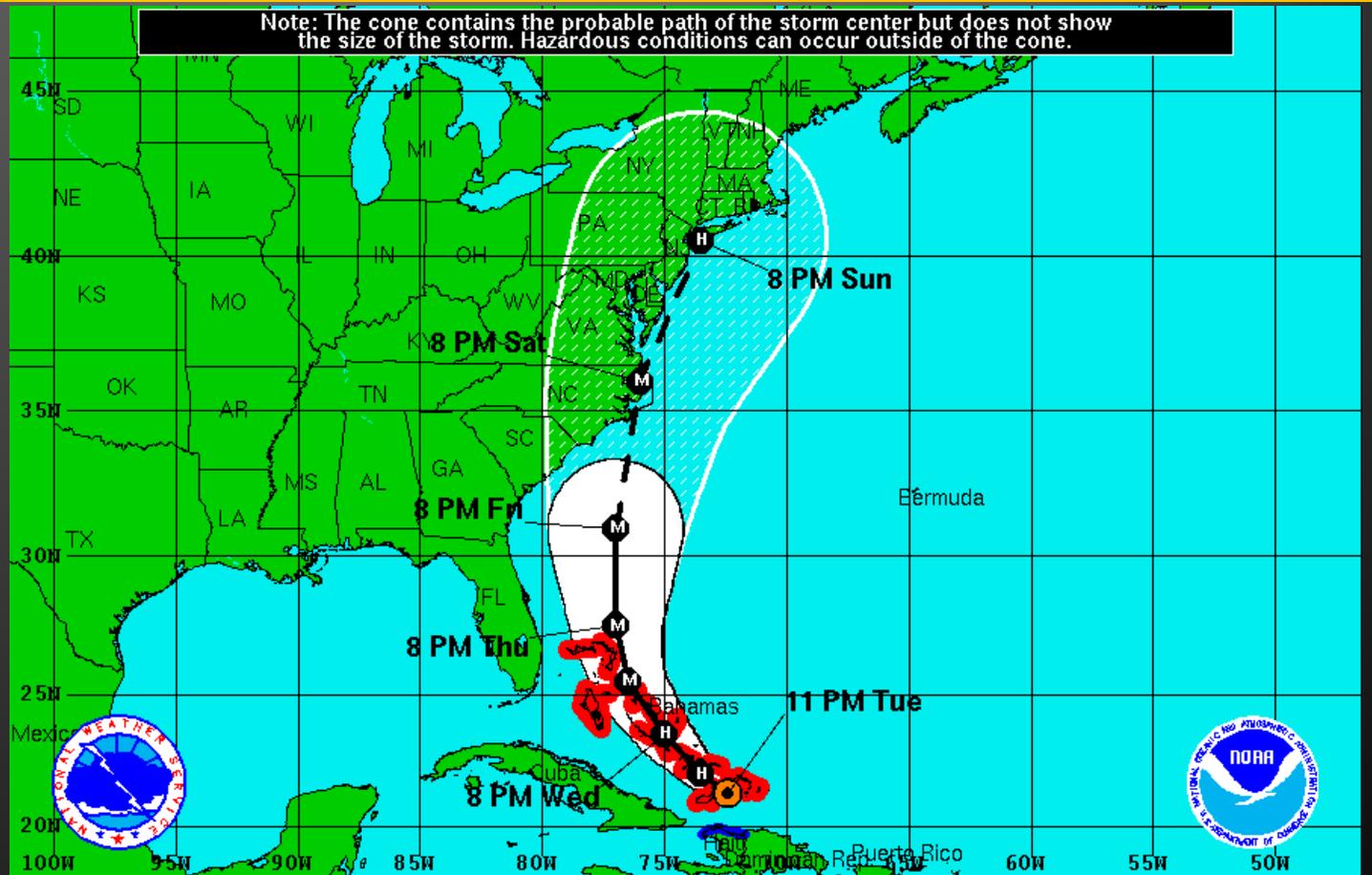
800 AM EDT THU AUG 18 2011

Satellite Image: 0722 AM EDT

Irene's Forecast Now vs. 10 years ago

**Current
Irene
Forecast
Model**

**3.5 days
before
landfall**



Hurricane Irene
 Tuesday August 23, 2011
 11 PM EDT Advisory 15
 NWS National Hurricane Center

Current Information:
 Center Location 21.3 N 72.4 W
 Max Sustained Wind 90 mph
 Movement WNW at 9 mph

Forecast Positions:
 ● Tropical Cyclone ○ Post-Tropical
 Sustained Winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:
 ▽ Day 1-3 ◁ Day 4-5

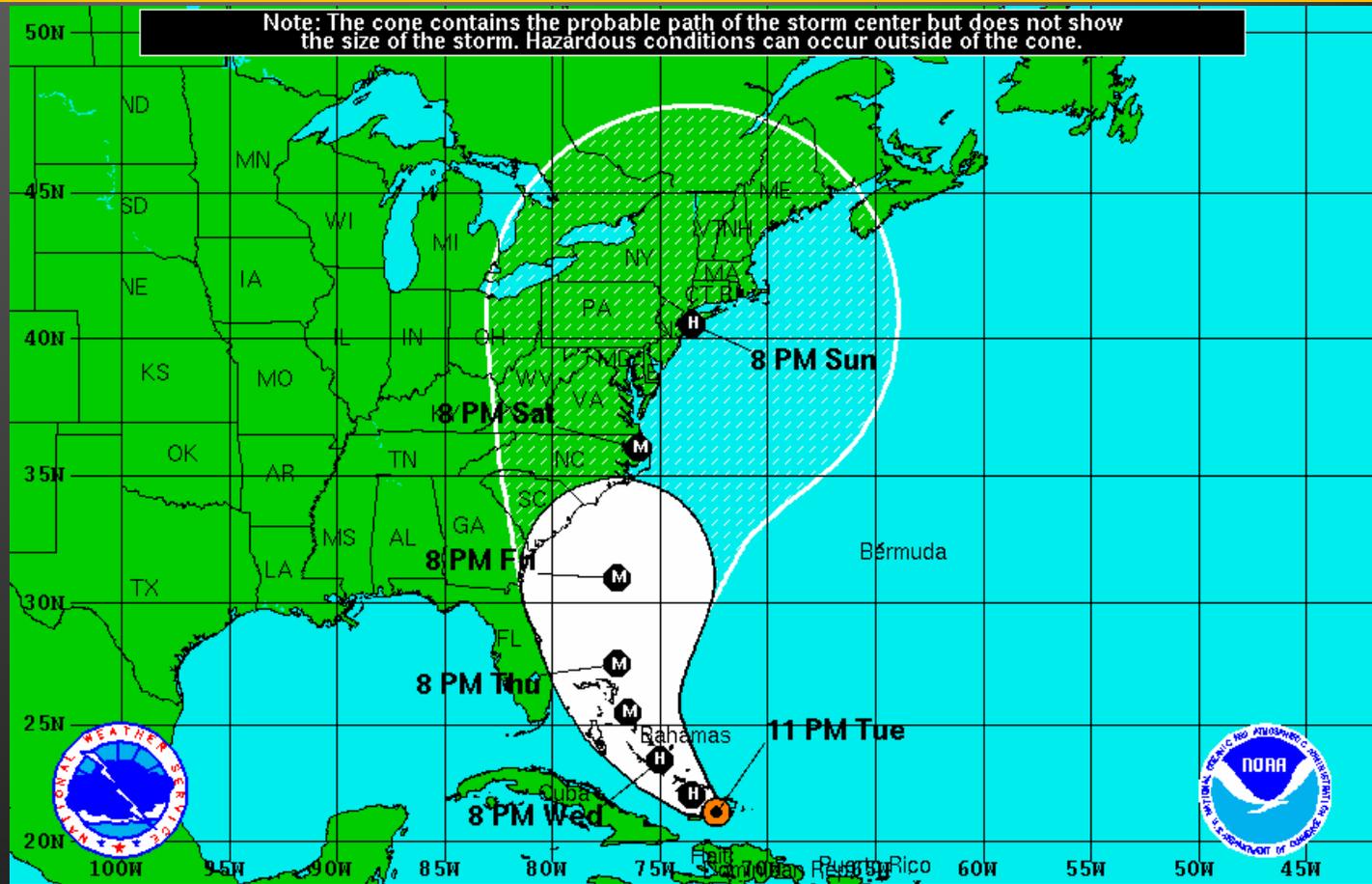
Watches:
 ■ Hurricane ■ Trop.Storm

Warnings:
 ■ Hurricane ■ Trop.Storm

Irene's Forecast Now vs. 10 years ago

Current v. Historic Irene Forecast Error Cones

3.5 days
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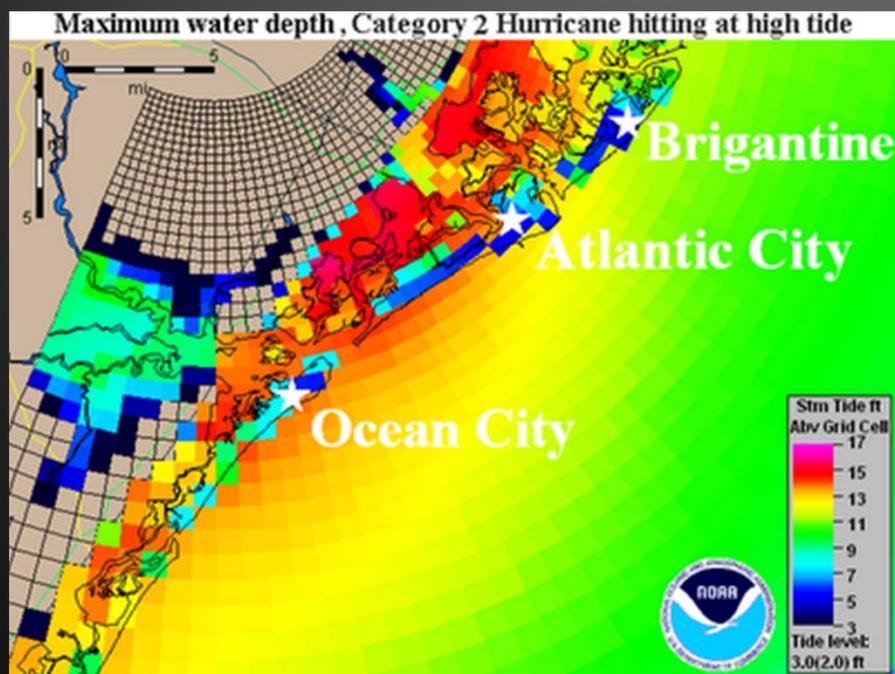
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Hurricane Irene Satellite vs. Track



NOAA: End-to-End Hazard Response

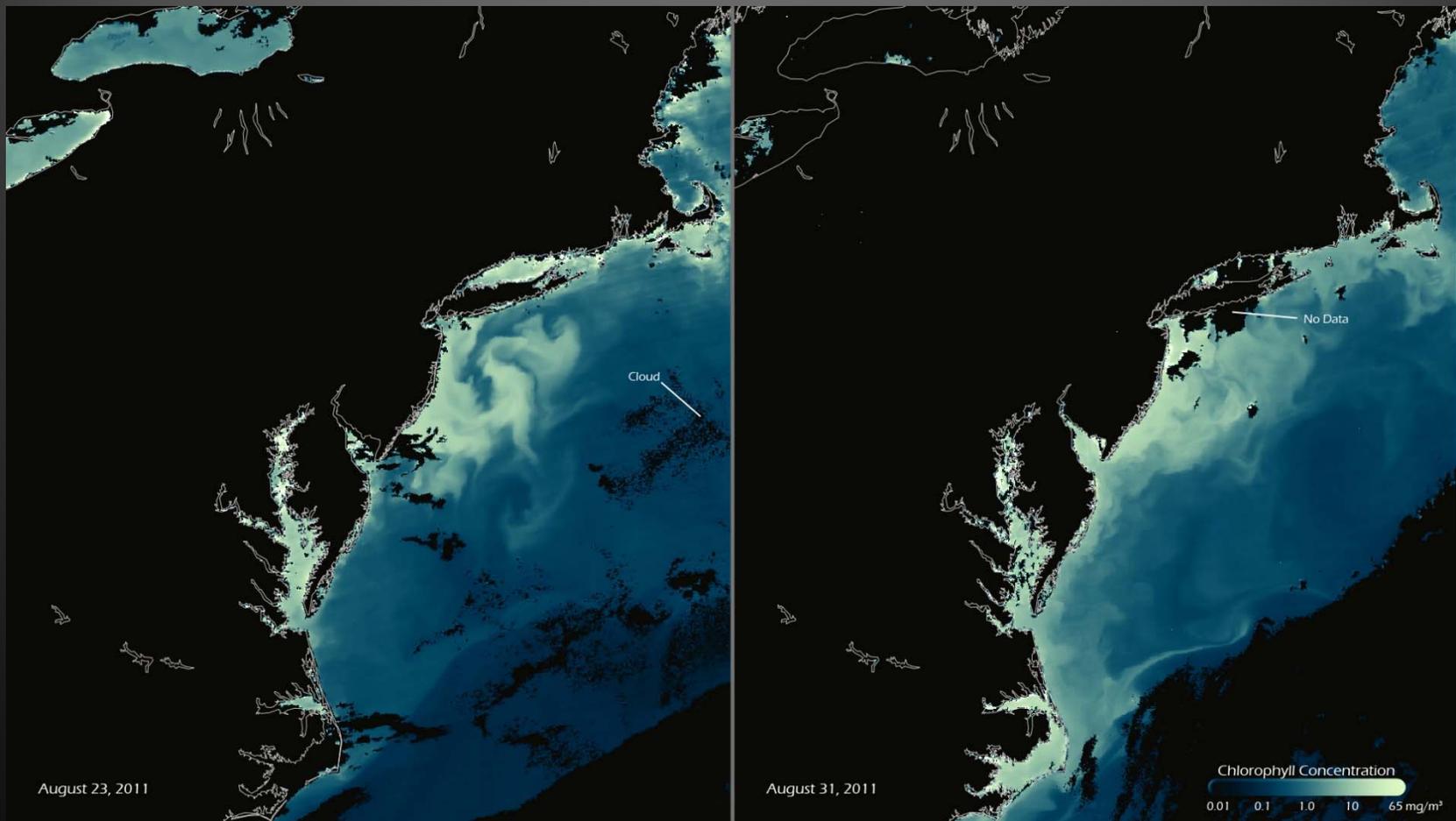


NOAA SLOSH (storm surge) Model



NOAA BAY HYDRO II Enabling
Resumption of Maritime Commerce

NOAA: End-to-End Hazard Response



Satellite imagery of chlorophyll concentrations aggravated by Hurricane Irene



Challenges

Systemic, integrating role in key national functions - often unrecognized

Critical Earth-observing infrastructure is capital-intensive and aging

- **Operational weather satellite continuity in great jeopardy**

Sustaining capacity for improvement in budget-cutting times

- **Core competencies, expertise, essential research**