Dr. Kathryn D. Sullivan
Assistant Secretary of Commerce for Environmental Observation & Prediction
National Oceanic & Atmospheric Administration | NOAA
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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.
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

Satellite Image: 0722 AM EDT

800 AM EDT THU AUG 18 2011

Infant Hurricane Irene
Irene’s Forecast Now vs. 10 years ago

Current Irene Forecast Model

3.5 days before landfall

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

Potential Track Area:

- Day 1-3
- Day 4-5

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 8 mph

Forecast Positions:
- Tropical Cyclone
- Post-Tropical
- Sustained Winds:
  - D < 39 mph
  - 39-73 mph

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 before landfall

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
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
Satellite imagery of chlorophyll concentrations aggravated by Hurricane Irene
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