

Online appendix A to

Experimental Ensemble Forecast Products for Hurricanes

by

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This appendix provides examples of US National Hurricane Center products that provide probabilistic forecast elements. Hurricane Ike of 2008 is used as an example with all products.



Intensity (Maximum Wind Speed) Probability Table
 Hurricane Ike Advisory Number 31
 5:00 PM EDT Sep 8 2008



Wind Range (mph)	Forecast Time						
	12 hour for 2 AM Tue	24 hour for 2 PM Tue	36 hour for 2 AM Wed	48 hour for 2 PM Wed	72 hour for 2 PM Thu	96 hour for 2 PM Fri	120 hour for 2 PM Sat
Dissipated	<1%	<1%	1%	1%	2%	11%	18%
Tropical Depression (<39)	1%	<1%	3%	2%	2%	9%	10%
Tropical Storm (39-73)	22%	15%	32%	19%	16%	17%	26%
Hurricane (all categories)	76%	84%	65%	79%	79%	63%	46%
-- Category 1 (74-95)	59%	59%	46%	40%	28%	19%	19%
-- Category 2 (96-110)	14%	19%	14%	23%	22%	16%	11%
-- Category 3 (111-130)	2%	5%	4%	13%	21%	18%	10%
-- Category 4 (131-155)	<1%	1%	1%	3%	7%	8%	5%
-- Category 5 (>155)	<1%	<1%	<1%	1%	1%	1%	1%
Forecast Maximum Wind	90 mph	90 mph	85 mph	100 mph	110 mph	115 mph	110 mph

Table A1: Sample of Intensity (maximum wind speed) probability table from the National Hurricane Center.

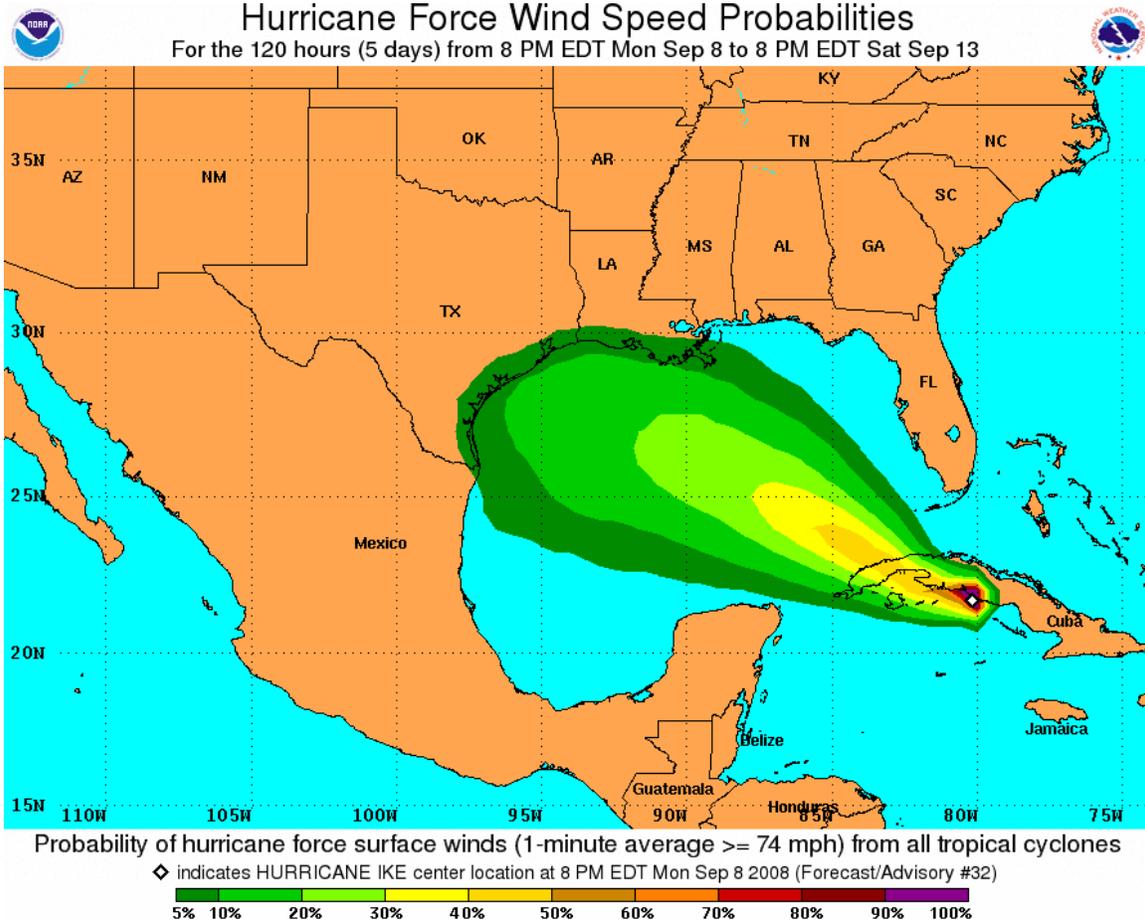


Figure A1: Sample of hurricane-force wind speed probability product from the NHC.

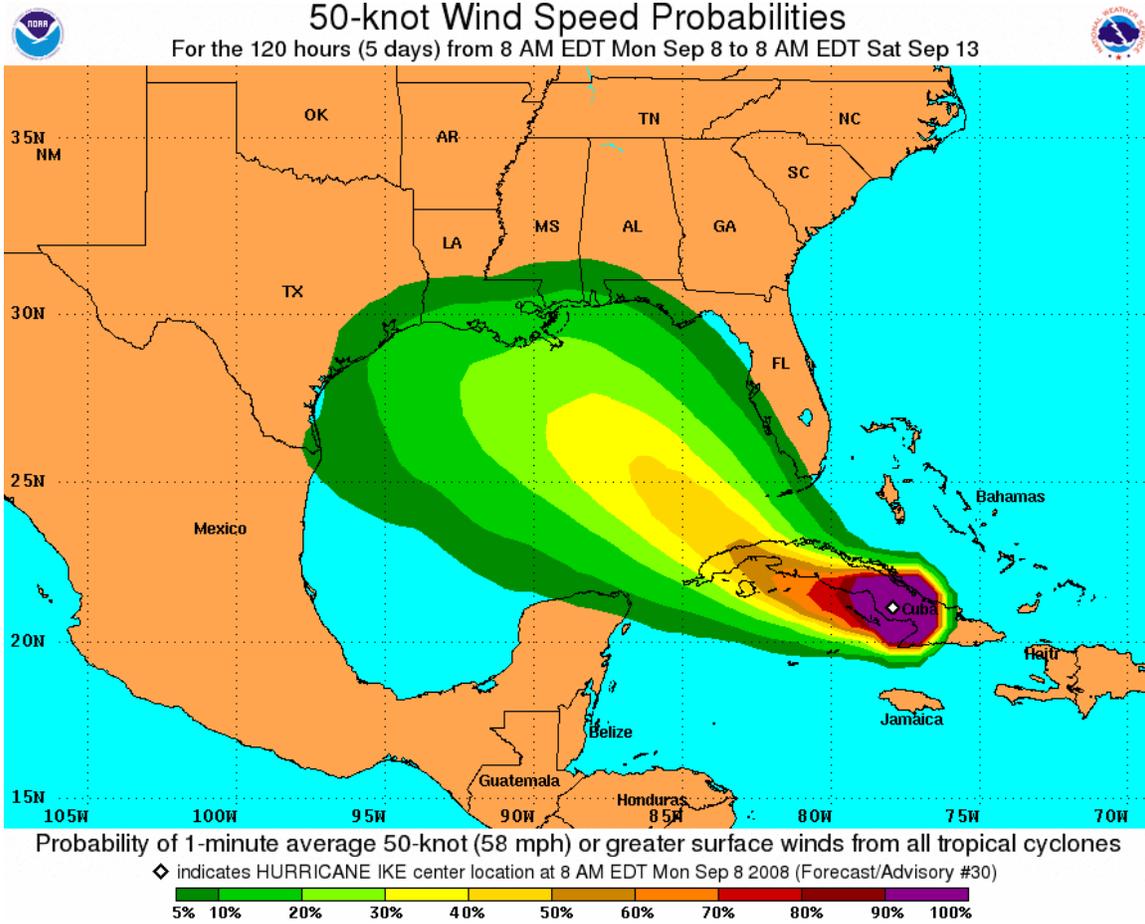


Figure A2: Sample of 50-knot ($\sim 26 \text{ ms}^{-1}$) wind speed probability product from the NHC.

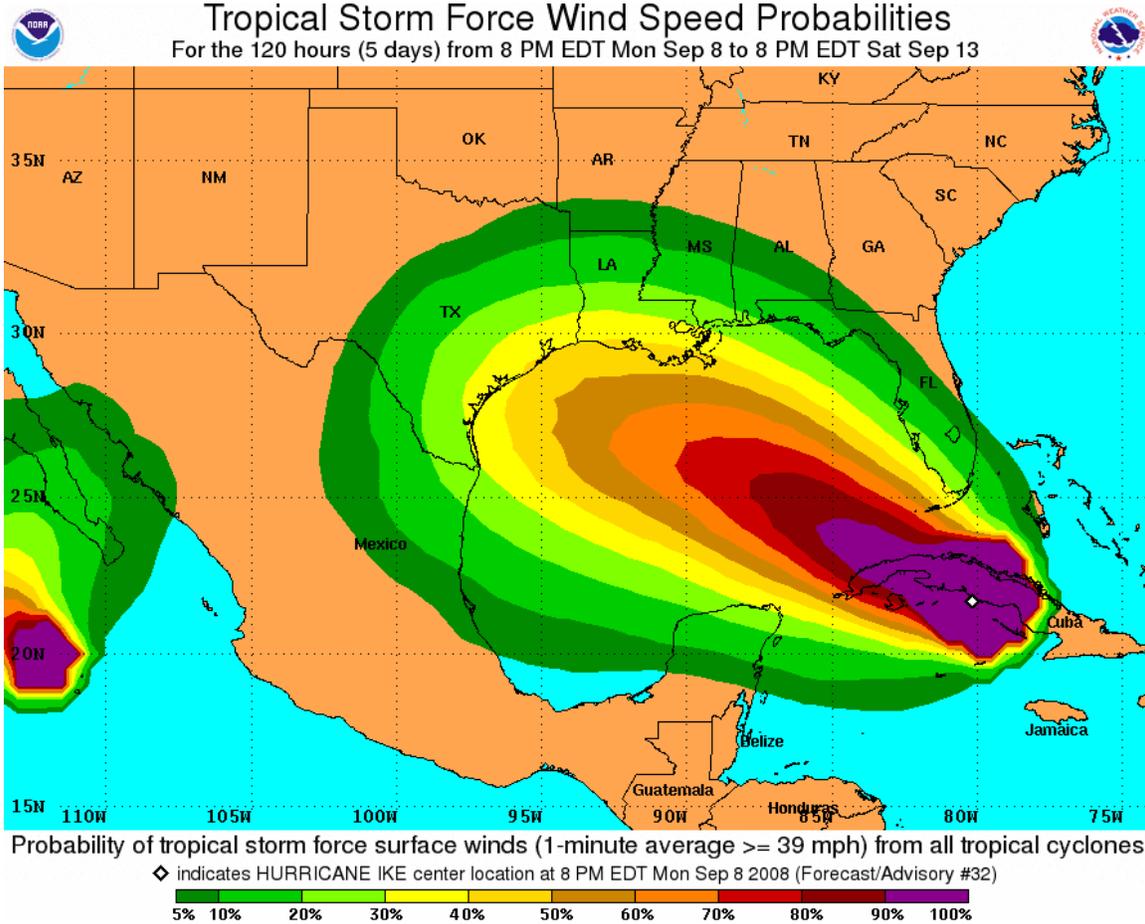


Figure A3: Sample of tropical-storm force wind-speed probability product from the NHC.

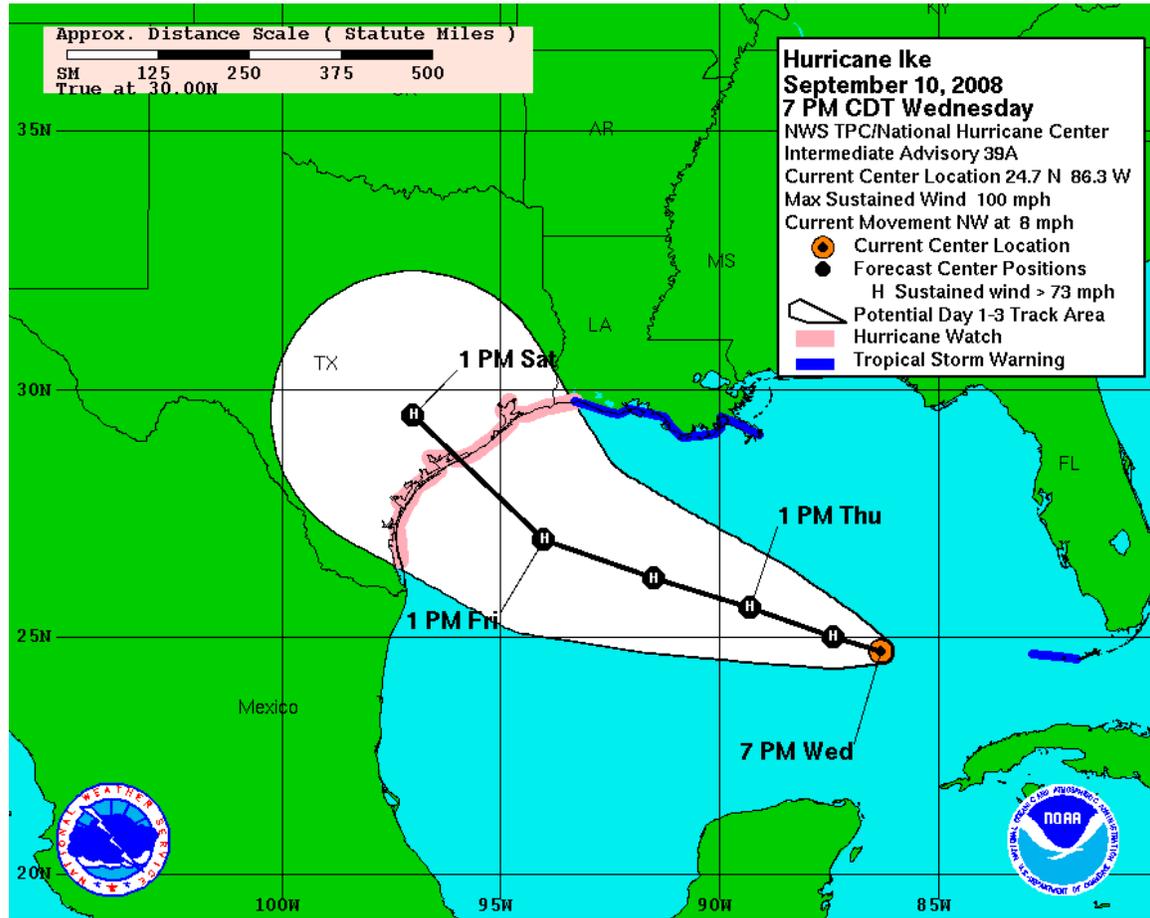


Figure A4: Sample of 3-day cone of uncertainty forecast product from the NHC.

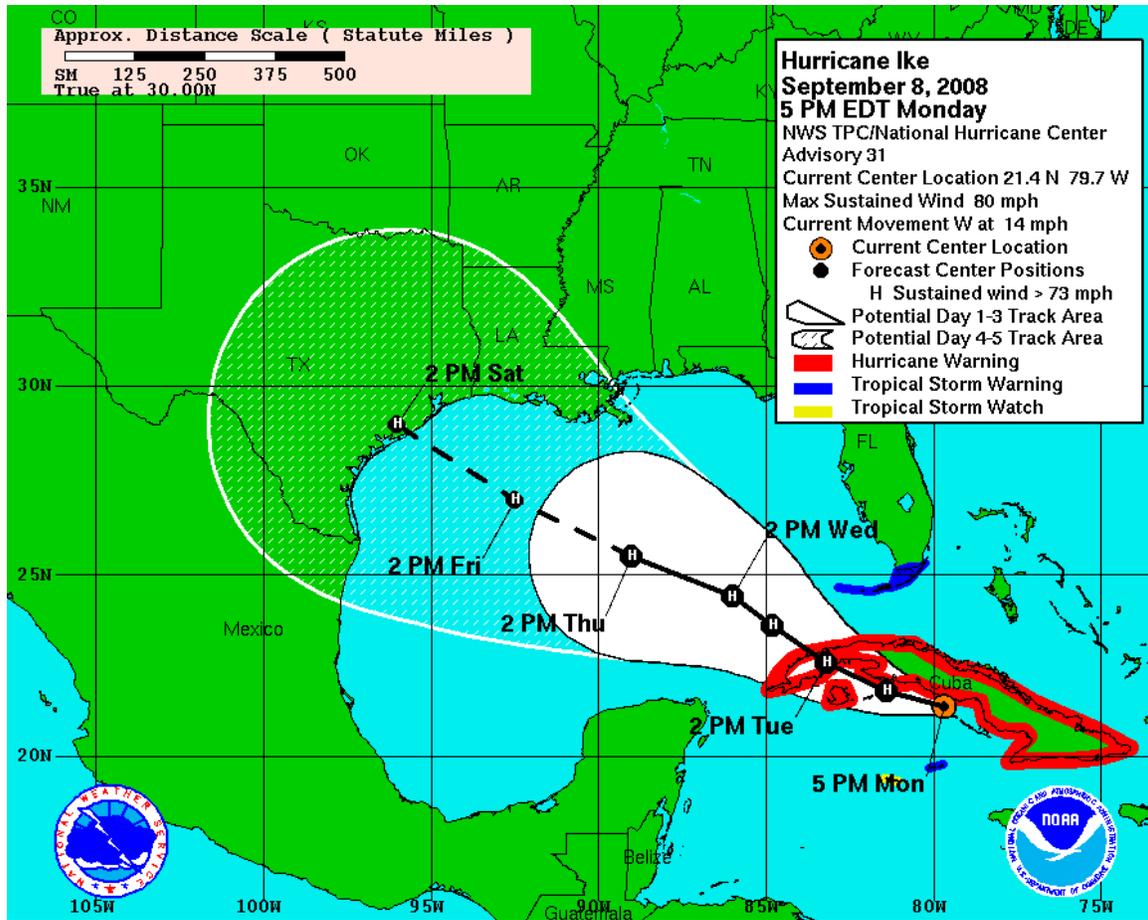


Figure A5: Sample of 5-day cone of uncertainty forecast product from the NHC.



Experimental Tropical Cyclone Storm Surge Probabilities
Chance of Storm Surge ≥ 5 feet at Individual Locations
Hurricane Ike (2008) Advisory 39
Valid from 05 PM EDT Wed Sep 10 to 10 PM EDT Sat Sep 13

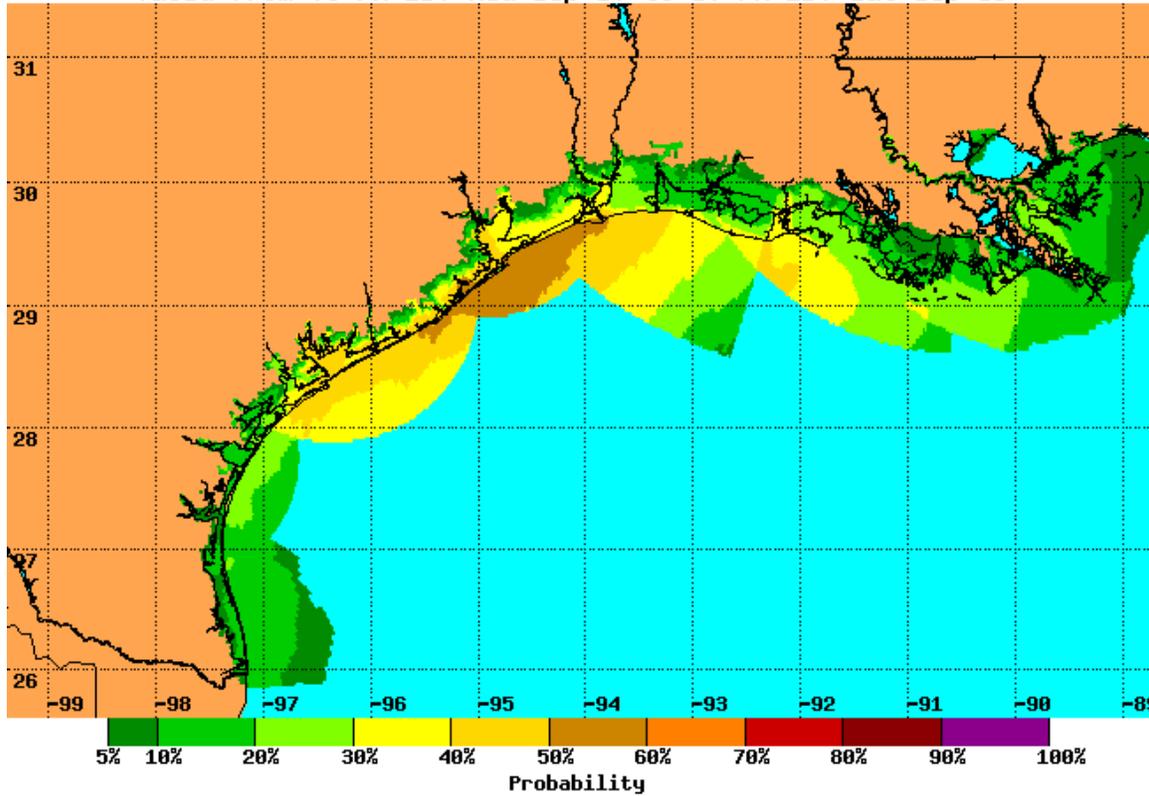


Figure A6: Probabilistic storm surge product, in this case the probability of a storm surge greater than 5 feet (1.52 m) during hurricane Ike. This experimental product from 2008 was made operational in 2010. The NHC now also produces charts for other surge heights.