

## KENNEDY SPACE CENTER HURRICANE PLAN SUMMARY

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The Kennedy Space Center Hurricane Plan which is designed to protect KSC facilities and personnel will be implemented if sustained winds of 50 knots or greater are predicted.

The Space Shuttle will be rolled back from the launch pad if the peak wind is forecast to reach 70 knots (79 mph). The rotating service structure cannot be moved after the sustained wind exceeds 40 knots (46 mph). Rollback of the Space Shuttle from the launch pad to the Vehicle Assembly Building must be completed before the sustained wind reaches 40 knots (46 mph), 60 knots (69 mph) in gusts with no lightning within 20 nautical miles.

Depending on the current vehicle configuration in the VAB, preparations for rollback begin between 40 and 47 hours before rollback weather constraints are expected to be reached. This period may be as long as 72 hours if more than one Space Shuttle is involved in the rollback plans or if the payloads require servicing.

Based upon the forecast for the onset of 50 knot winds, the KSC Center Director, in coordination with the Commander of the 45th Space Wing, will establish when a Hurricane Condition status is to be declared at KSC and CCAFS and later upgraded when conditions warrant. These decisions are made in consultation with the Eastern Range Weather Operations Center and the KSC Emergency Preparedness Officer. The KSC Emergency Operations Center (EOC) will be activated 72 hours before winds are forecast to reach a sustained velocity of 50 knots (58 mph). The KSC Emergency Preparedness Officer is responsible for directing hurricane associated activities from this facility until after the storm.

If a launch countdown is in progress, a downrange weather advisory will be issued by the Shuttle Weather Officer to the Mission Management Team for their consideration if the wind in the solid rocket booster recovery area is forecast to exceed a sustained velocity of 26 knots (30 mph) during retrieval operations. Seas in excess of Sea State 5 (8-13 feet) may also be a factor considered by the Mission Management Team.

The table below indicates to what wind speed in miles per hour KSC facilities were originally designed.

	O&C	LCC	VAB	Pads	OPF	MILA	RPSF	PHSF	SSPF	NSLD
Sus-tained	114	114	114	114	105	104	105	110	110	110
Gust	125	125	125	125	105	125	126	132	132	132

KSC facilities built after Hurricane Andrew have been constructed to the revised hurricane engineering standard of 130 - 135 mph.

### Hurricane Conditions

**Condition IV:** expect sustained 50 knot winds within 72 hours. When a condition IV is declared, implementation of procedures in the KSC Hurricane Plan will begin. Designated personnel will continue with their normally assigned duties but will also be available for duties associated with hurricane preparations.

**Condition III:** expect sustained 50 knot winds within 48 hours. During Condition III, designated personnel will be relieved of their normal duties as required for hurricane preparations and securing will begin. At the discretion of the Center Director, non-essential personnel may be sent home at this time.

**Condition II:** expect sustained 50 knot winds within 24 hours. When Condition II is declared, the Ride-Out Crew who are designated to remain at KSC in critical facilities during the hurricane shall be notified of responsibility.

**Condition I:** expect sustained 50 knot winds within 12 hours. Securing of all facilities should be completed during this time. In Condition I, all ingress and egress to KSC shall cease at a time determined by the KSC Center Director. All gates will be closed and the Hurricane Ride-Out crew will be on station until the "all clear" is given.

### Hurricane Categories

Category	Wind	Storm Surge
Category 1	74-95 mph	4-5 feet
Category 2	96-110 mph	6-8 feet
Category 3	111-130 mph	9-12 feet
Category 4	131-155 mph	13-19 feet
Category 5	greater than 155 mph	greater than 19 feet