



NOAA NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE



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Hurricane Awareness Week: Tropical Cyclone Climatology and Definitions

During Hurricane Awareness Week 2012 the Central Pacific Hurricane Center will share a series of statements regarding tropical cyclones and their various threats to the State of Hawaii. Today's topic: Tropical Cyclone Climatology and Definitions.

Tropical cyclone is a generic term referring to a storm that forms in tropical regions that is essentially a "warm-core" storm without fronts or other weather features associated with it. There are three types of tropical cyclones, each defined by their associated wind speeds.

Tropical Depression – Winds up to 38 mph and designated by a number (ex. TD-01)

Tropical Storm – Winds of 39 to 73 mph and designated by a name

Hurricane – Winds equal to or greater than 74 mph and designated by a name. Hurricanes are broken down further into five categories of increasing wind threat with category 5 being the strongest.

On average 4 to 6 tropical cyclones form in or travel through the Central Pacific ocean during the calendar year. Records indicate that one-third of these cyclones reach hurricane strength, one-third reach only tropical storm strength, and the final one-third only reach tropical depression strength.

Since 1970 tropical cyclones have impacted the Central Pacific each month of the year, excluding February and May. The peak time of occurrence is July through October, with the most common occurrence occurring in August. Of the 176 tropical cyclones in the Central Pacific since 1970, 166 occurred during the July through October time frame.

Hawaii is certainly not immune to direct impacts from tropical cyclones. Three landfalls have occurred since 1950: Hurricane Dot (1959), Hurricane Iwa (1982), and Hurricane Iniki (1992). Each of these hurricanes brought very significant damage in their wake.

For more information regarding tropical cyclone climatology see www.weather.gov/cphc.



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