

# CYCLONIC WEATHER

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WHAT TYPES OF WEATHER ARE CYCLONIC?



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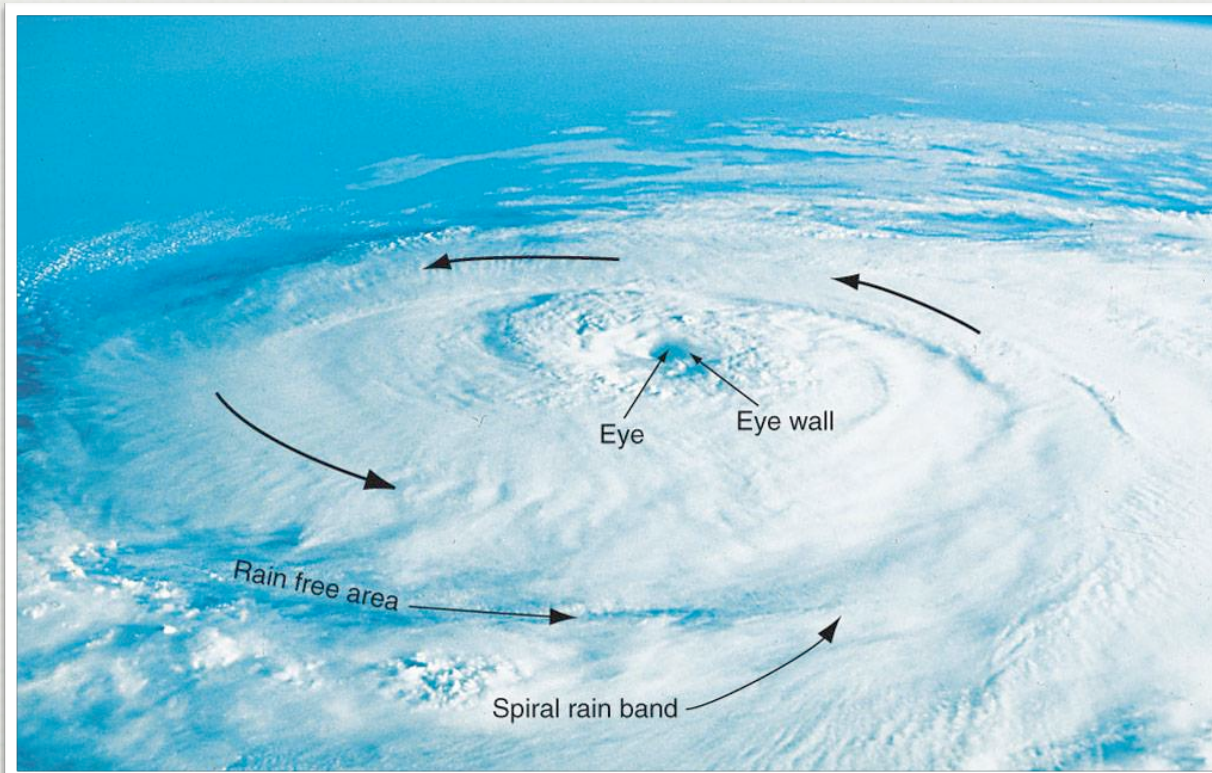
DURING A HURRICANE

# CYCLONIC WEATHER

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- HURRICANE - LOW PRESSURE TROPICAL STORM THAT STARTS IN THE WESTERN ATLANTIC AND REACHES WINDS ABOVE 74 MPH





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## HURRICANE TERMINOLOGY

# CYCLONIC WEATHER

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## HURRICANE STATISTICS

- LARGEST OF ALL THE STORMS
- APPROXIMATELY 10 PER YEAR
- NEARLY 400 DEATHS PER YEAR



# CYCLONIC WEATHER

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- SAFFIR-SIMPSON SCALE - SYSTEM FOR CLASSIFYING HURRICANES

Strength	Wind Speed	Storm Surge
Category 1	74 - 95	4 - 5
Category 2	96 - 110	6 - 8
Category 3	111 - 130	9 - 12
Category 4	131 - 155	13 - 18
Category 5	> 155	> 18

# CYCLONIC WEATHER

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## HURRICANE DANGERS

- SEVERE WINDS FROM 74 - 155 MPH





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SAFFIR-SIMPSON SCALE

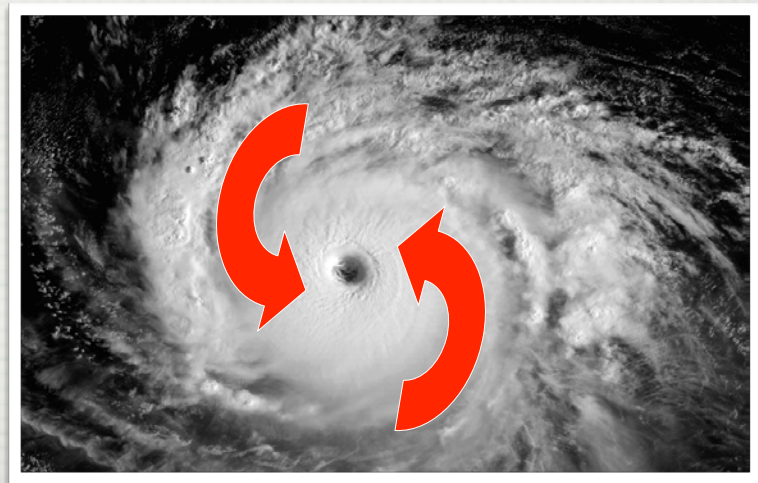


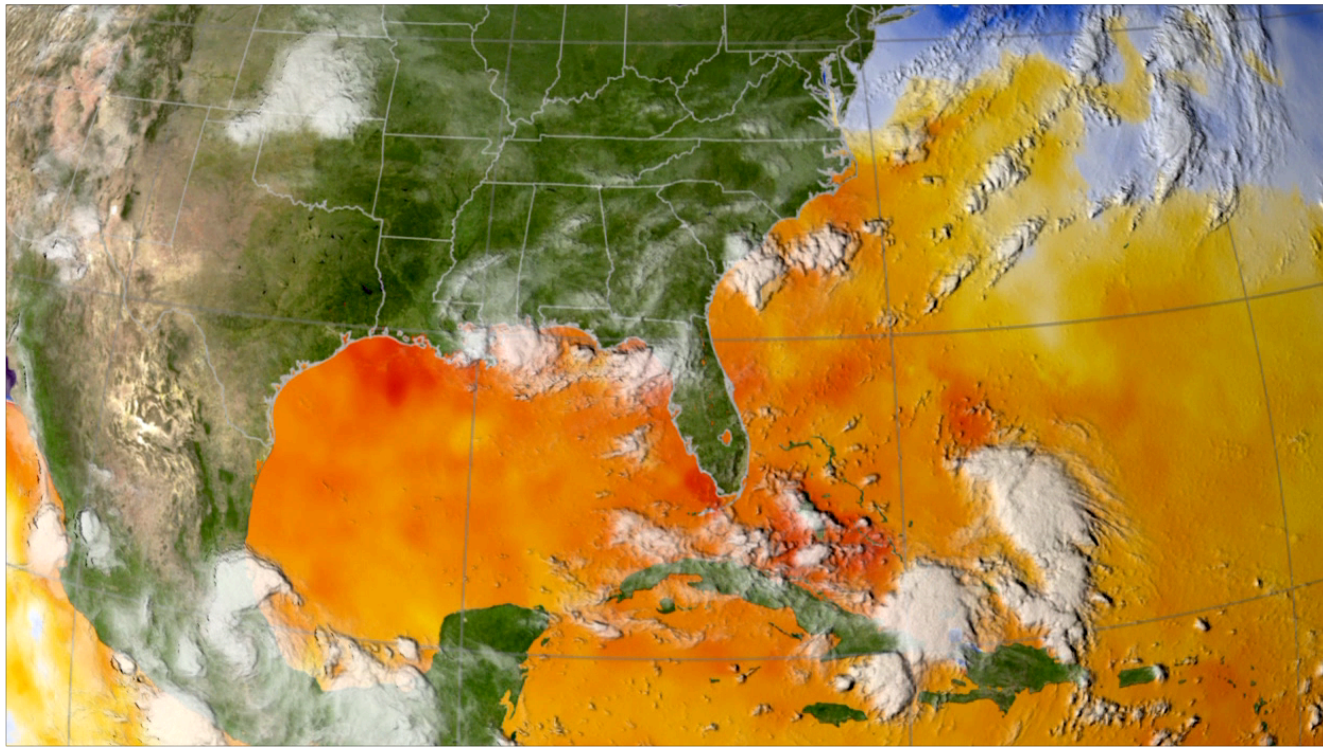
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## HURRICANE DANGERS

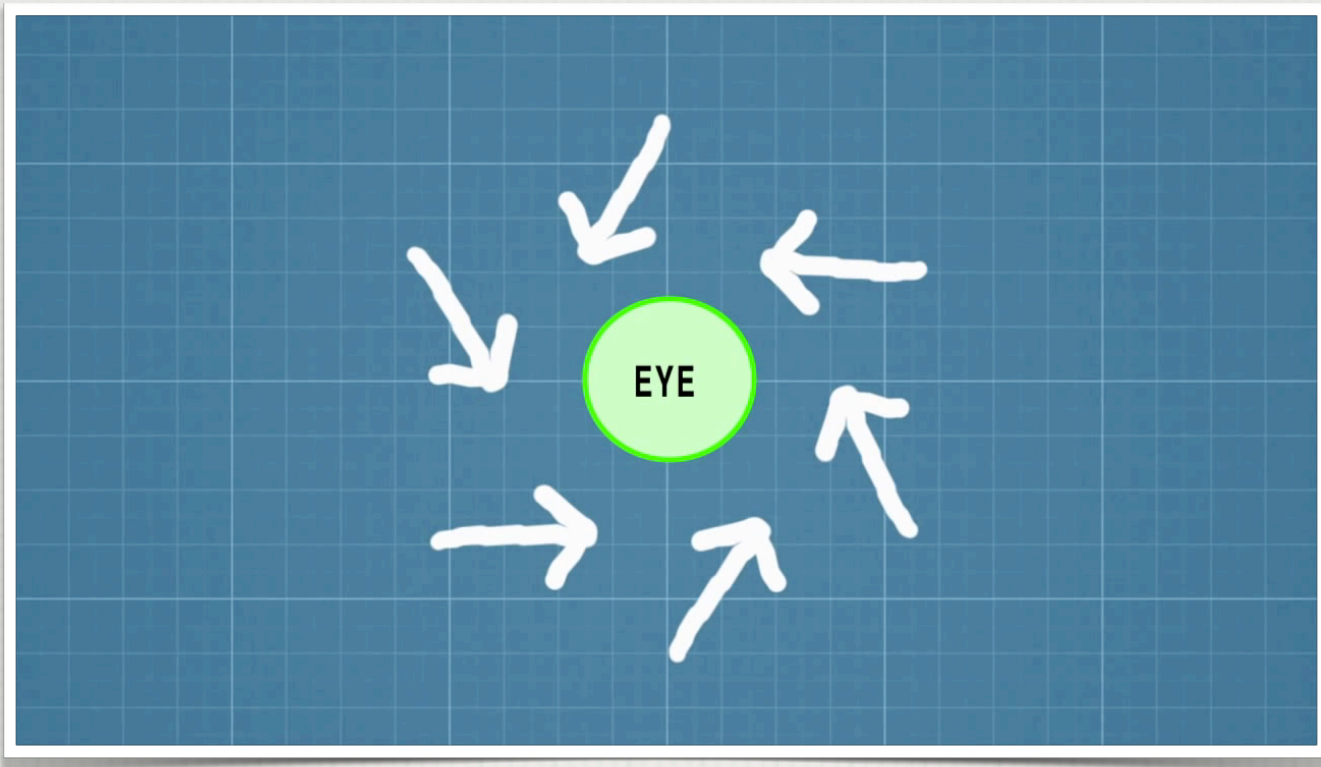
- WIND DIRECTION IS COUNTERCLOCKWISE AND INWARD





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INWARD COUNTERCLOCKWISE MOTION



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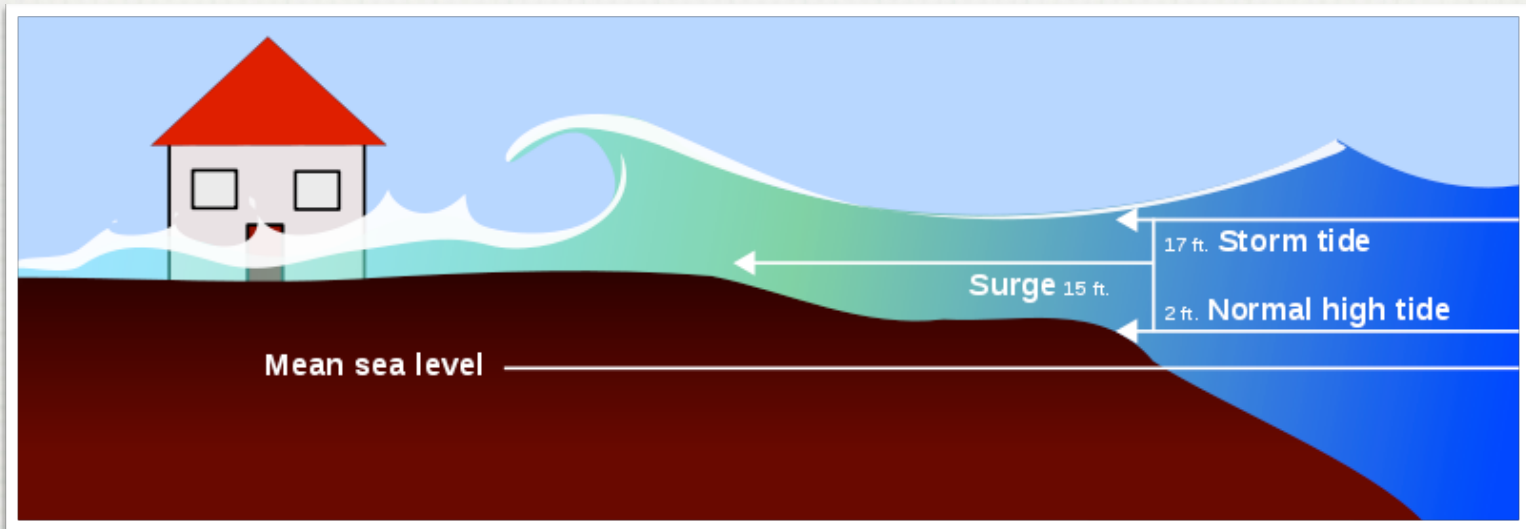
INWARD COUNTERCLOCKWISE MOTION

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## HURRICANE DANGERS

- STORM SURGE - A DOME OF WATER 40 TO 60 MILES LONG THAT MOVES ONTO SHORE NEAR THE LANDFALL POINT OF THE HURRICANE



STORM SURGE



## ***Hurricane Storm Surge***

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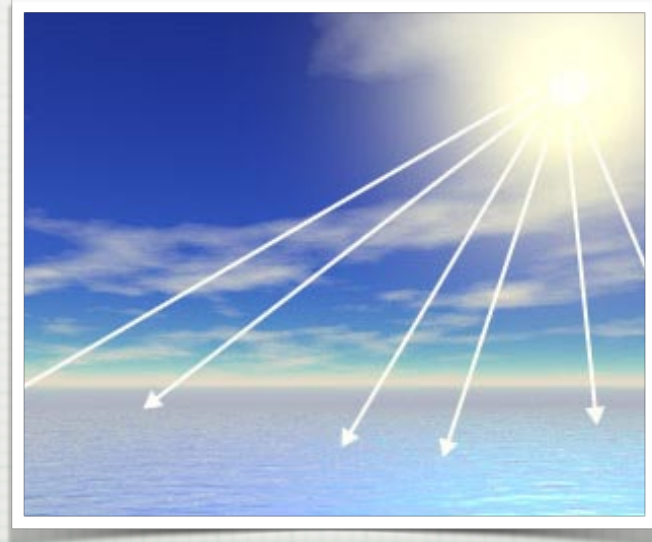
STORM SURGE

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## HURRICANE FORMATION

1. THE SUN HEATS UP OCEAN WATER (ESPECIALLY NEAR THE EQUATOR)
2. BY THE END OF SUMMER, OCEAN TEMPERATURES REACH INTO THE 80'S



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## HURRICANE FORMATION

3. A THUNDERSTORM MOVES WESTWARD OFF OF AFRICA AND INTO THE ATLANTIC OCEAN
4. WHEN UPPER WIND VELOCITIES ARE LOW, THUNDERSTORMS ARE GIVEN A CHANCE TO GAIN STRENGTH



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## HURRICANE FORMATION

5. THE FAST RISING AIR (SUPPLIED BY THE WARM OCEAN) ALLOWS THE THUNDERSTORM TO GAIN STRENGTH
6. AS IT GROWS, EARTH'S ROTATION CAUSES IT TO SPIN COUNTERCLOCKWISE (CORIOLIS EFFECT)

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## HURRICANE FORMATION

7. AS THEY BUILD A THUNDERSTORM CHANGES TO A TROPICAL DEPRESSION, THEN A TROPICAL STORM, AND FINALLY A HURRICANE



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A HURRICANES AFTERMATH

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- TORNADO - A ROTATING COLUMN OF AIR RANGING IN WIDTH FROM A FEW YARDS TO MORE THAN A MILE AND WHIRLING AT DESTRUCTIVELY HIGH WINDS



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## TORNADO STATISTICS

- MOST VIOLENT STORMS
- APPROXIMATELY 1000 PER YEAR
- NEARLY 50 DEATHS PER YEAR



# CYCLONIC WEATHER

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## TORNADO DANGERS

- SEVERE WINDS FROM 250 MPH AND ABOVE
- WIND DIRECTION IS COUNTERCLOCKWISE AND INWARD





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DURING A TORNADO

# CYCLONIC WEATHER

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## TORNADO FORMATION

1. DEVELOP FROM AN INTENSE THUNDERSTORM
2. HEATING IS VERY INTENSE AND WARM AIR RISES IN STRONG CONVECTION CURRENTS

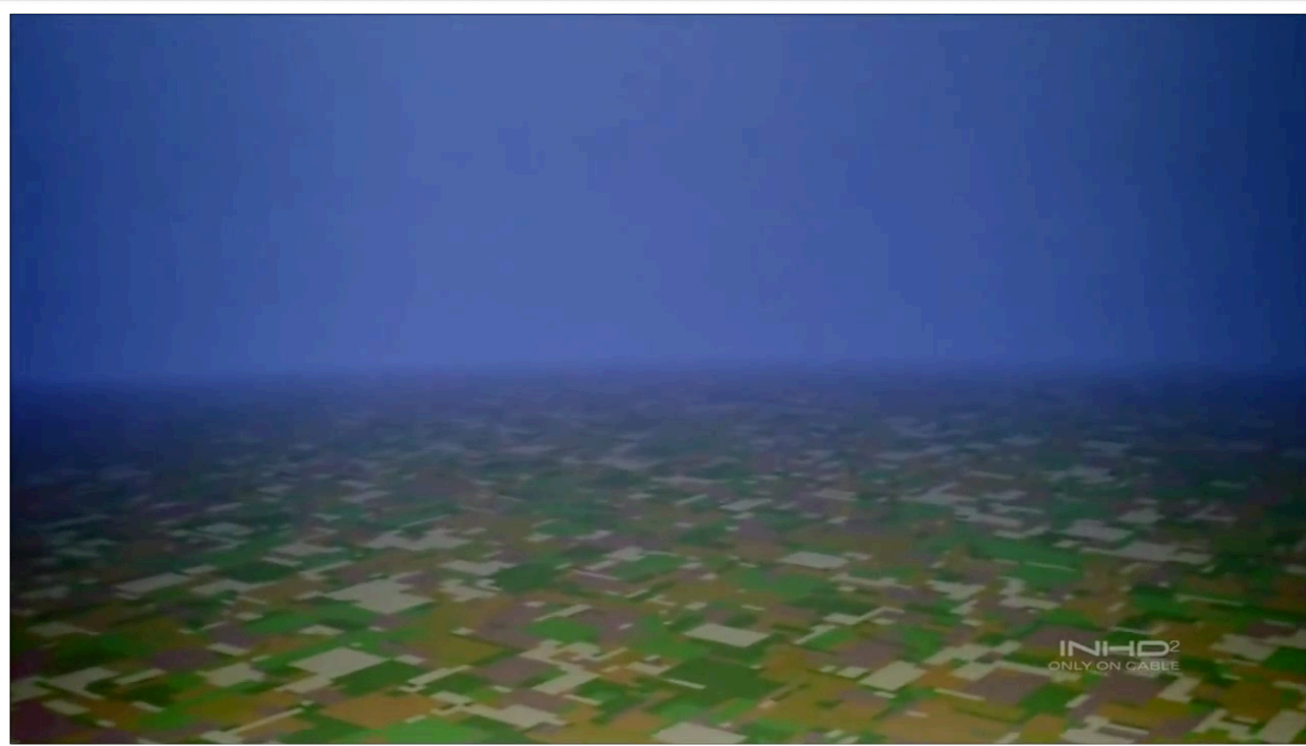


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## TORNADO FORMATION

3. THE RISING AIR CAUSES A LOW PRESSURE CENTER
4. AS AIR RUSHES INTO THE CENTER IT STARTS TO SPIN UPWARD



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TORNADO FORMATION



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A TORNADOES AFTERMATH