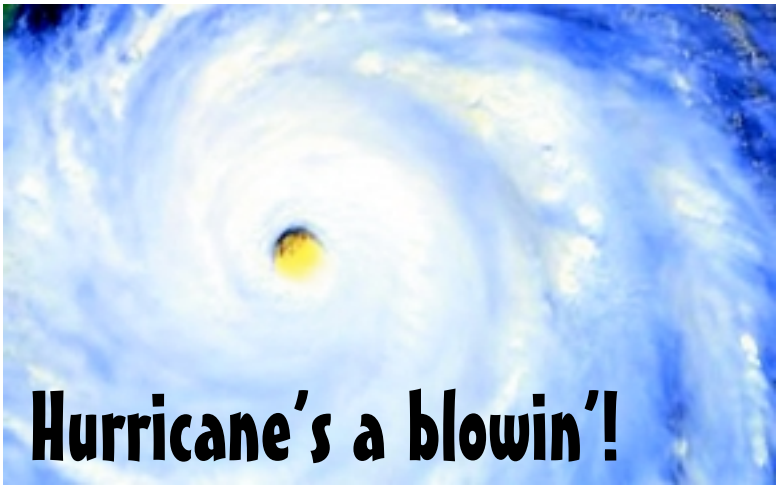

Hurricane's a blowin'!

Each hurricane season, which runs from June 1 to November 30th, residents in South Florida prepare for the possibility of a hurricane. The resident plant and animal communities of Biscayne Bay, however, can only react to these sometimes catastrophic conditions. Let's imagine that a Category 2 hurricane is heading straight west from the Atlantic Ocean and the eyewall's north/right side -- with onshore winds -- is traversing Biscayne Bay. Extremely strong winds are one of the serious ways a hurricane can affect the bay. Category 2 winds ranging from 96 to 110 mph moving across the bay can create waves three feet high. As the storm moves towards land, these waves build up and push water onto the shores. These waves combine with an effect called *storm surge*, which is an abnormal rise in the height of the sea surface. In Biscayne Bay, the average storm surge from a Category 2 hurricane can be about 4-6 feet higher than the normal tide. This combination of storm surge, increased wave activity, and wind over the surface of such a shallow body of water churns up much of the fine sediment and sand that covers the bottom of the bay, which can later settle down over fragile corals and smother sea grass beds.

On the other hand, if the left/south side eyewall (with winds blowing offshore) traverses the bay, winds may temporarily blow all the water away in shallow areas of the bay, exposing sea grass beds and all the tiny organisms that live in their grassy leaves to extremely harsh winds.

Biscayne Bubbles

Sea Grant Florida

NOAA

Text: Erica Van Coverden/NOAA's Atlantic Oceanographic and Meterological Laboratory

Graphic: www.osei.noaa.gov

Hurricane's a blown'!

Each hurricane season, which runs from June 1 to November 30th, residents in south Florida prepare for the possibility of a hurricane. The resident plant and animal communities of Biscayne Bay however, can only react to these sometimes catastrophic conditions. Let's imagine that a Category 2 hurricane is heading straight west from the Atlantic Ocean and the eyewall's north / right side -- with onshore winds -- is traversing Biscayne Bay. Extremely strong winds are one of the serious ways a hurricane can affect the bay. Category 2 winds ranging from 96 to 110 mph moving across the bay can create waves 3 ft high. As the storm moves towards land, these waves build up and push water onto the shores. These waves combine with an effect called *storm surge*, which is an abnormal rise in the height of the sea surface. In Biscayne Bay, the average storm surge from a Category 2 hurricane can be about 4-6 ft higher than the normal tide. This combination of storm surge, increased wave activity, and wind over the surface of such a shallow body of water churns up much of the fine sediment and sand that covers the bottom of the bay, which can later settle down over fragile corals and smother sea grass beds.

On the other hand, if the left / south side eyewall (with winds blowing offshore) traverses the bay, winds may temporarily blow all the water away in shallow areas of the bay, exposing sea grass beds and all the tiny organisms that live in their grassy leaves to extremely harsh winds.

Biscayne Bubbles

Sea Grant Florida

NOAA

Text: Erica Van Coverden/NOAA's Atlantic Oceanographic and Meterological Laboratory

Graphic: www.osei.noaa.gov