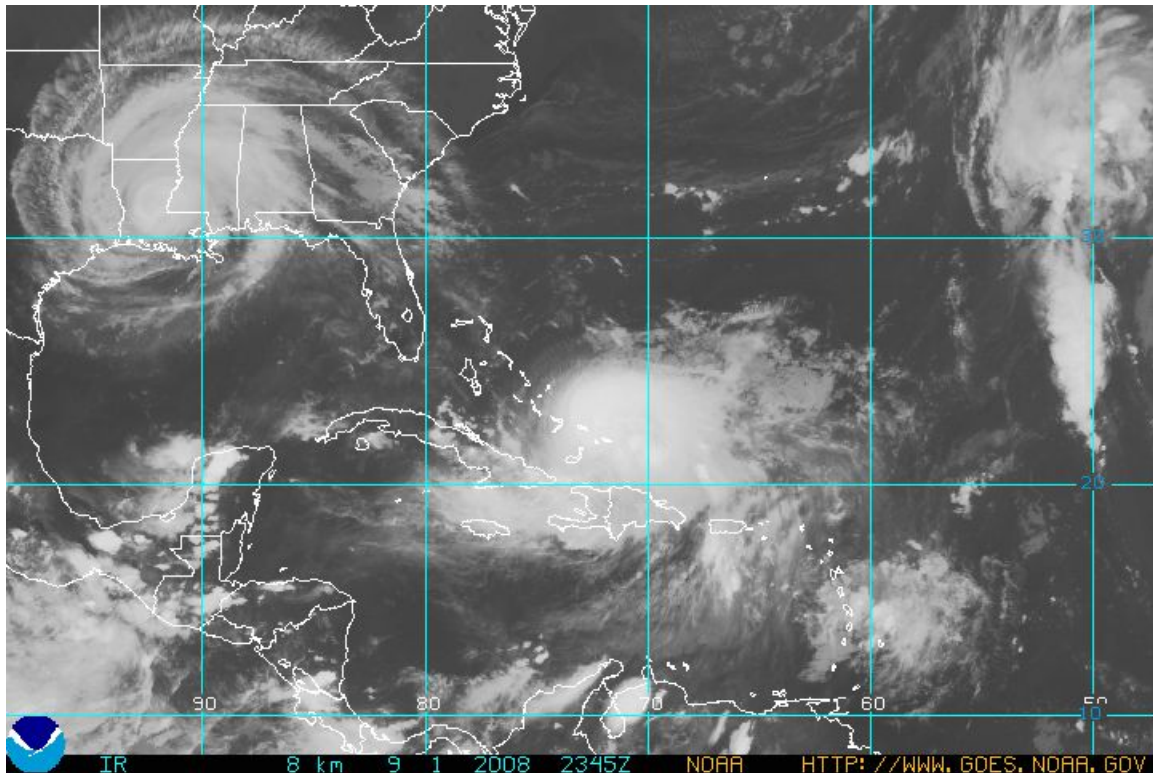


VERY ACTIVE TROPICS CONTINUES NEXT WEEK

By Joseph D'Aleo, CCM, AMS Fellow



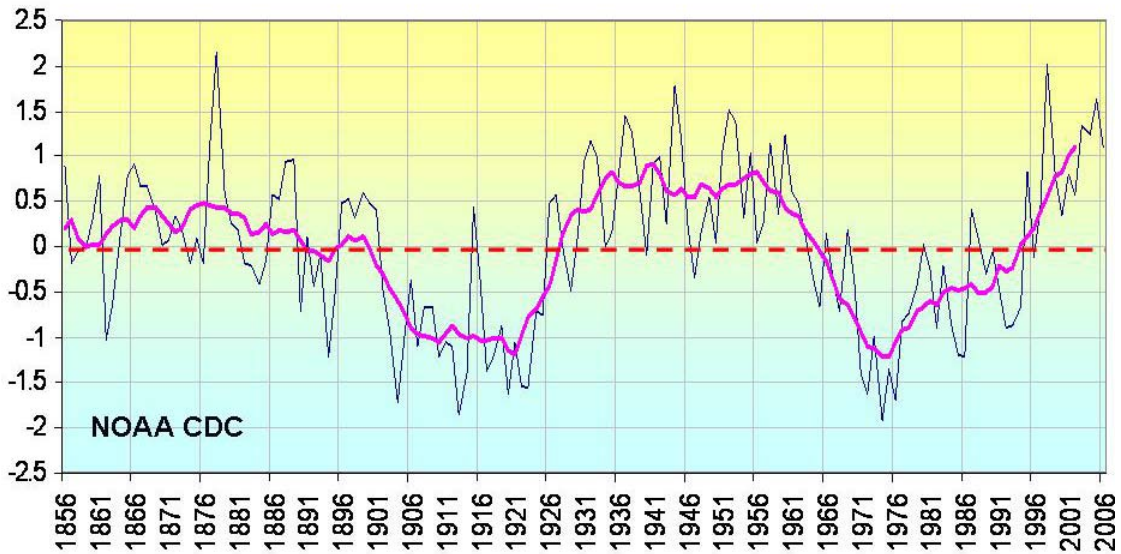
Gustav is weakening inland and Hurricane Hanna is vacationing in the Bahamas. Tropical Storm Ike is organizing in the eastern Atlantic.

The hurricane season was expected to be active with enhanced landfall threats. This is characteristic of summers when the Atlantic is in its warm mode and coming off La Nina winters. Not surprisingly though the media including [AP's Seth Borenstein](#) blamed this year's storms and the increase in activity since 1995 on global warming. He quoted his favorite AGW cheerleaders Judith Curry and Kevin Trenberth who provided facts to support the increase in activity since the 1990s.

No one questions that increase. Bill Gray and most of the hurricane forecasters predicted the Atlantic would see an increase in the number of storms, major storms and landfalling systems ever since 1995 based on natural multidecadal cycles in the Atlantic.

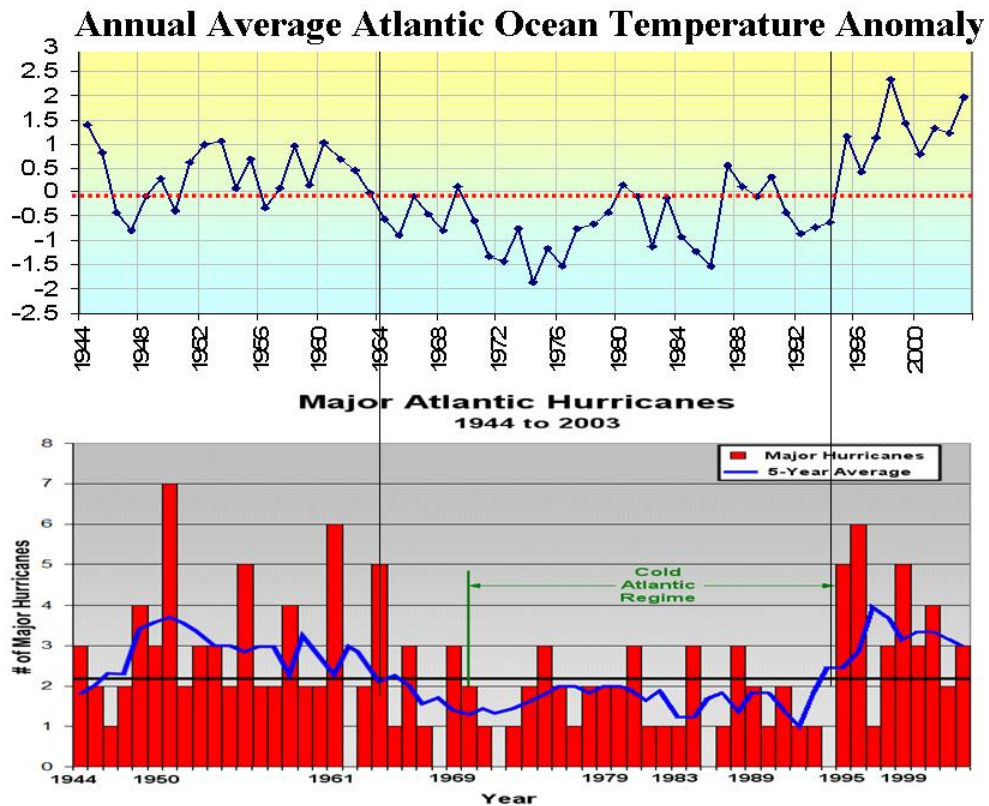
The Atlantic goes through cycles of warming and cooling with a period of about 70 years. A measure of this is the AMO, the standardized North Atlantic mean temperature from 0 to 70N. Note the warm period in the late 1800s, the late 1920s to the middle 1960s and again after 1995. Curry and Trenberth want you to believe the natural cold to warm transition of the AMO is somehow driven by CO2.

Annual Atlantic MultiDecadal Oscillation (AMO)



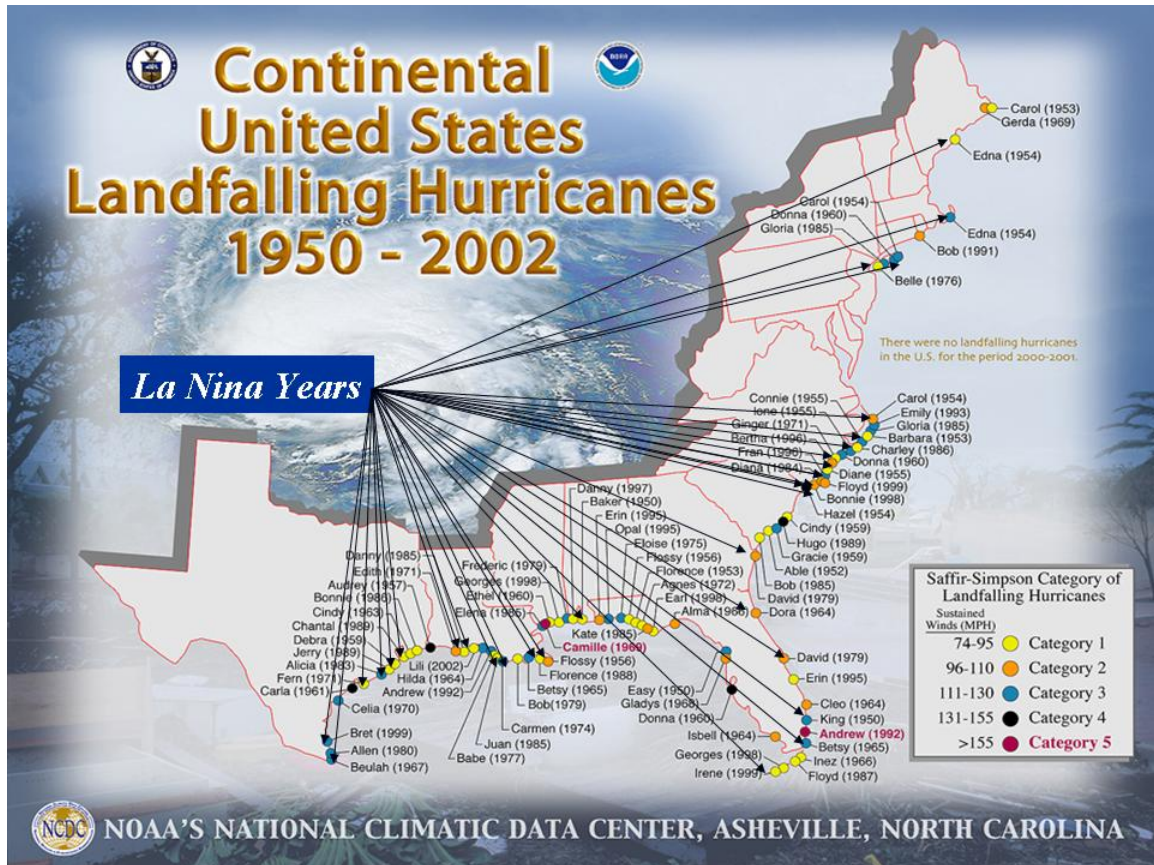
Mean ocean temperature anomalies in the Atlantic from 0 to 70N

Then number of storms and the number of major hurricanes (CAT 3-5) increase during the warm Atlantic phases as shown below



The Pacific plays a role as to where these storms go. When the Pacific is in its cold mode and La Ninas occur, the seasons are especially active and the areas affected much more extensive. When the Pacific is warm or there are El Ninos present, increased shear reduce the activity as was the case in 1998.

The La Nina years favor more of a shotgun pattern for landfalls with the Gulf, Florida, the southeast and northeast all are at enhanced risk.



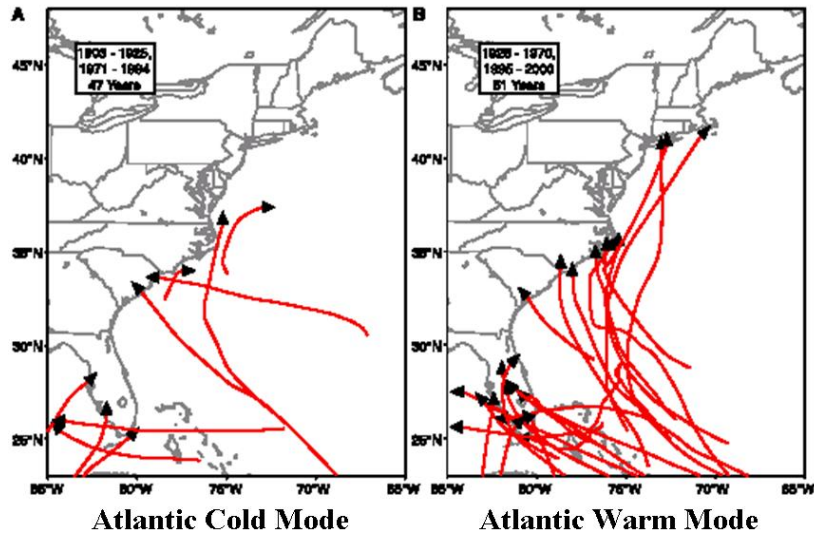
So far this year the Gulf and Florida has borne the brunt but before the week is over the southeast will see Hanna make landfall and its heavy rains and gusty winds are felt in the Mid-Atlantic and northeast. It doesn't appear Hanna will be able to intensify much with strong northerly shear and is forecast to come inland as a CAT 1 system. It has defied the shear to become a hurricane however.

Storms that hit the northeast directly often come from near where Hanna is but it appears too much ridging to the north will develop the next few days and deflect it northwest before it turns up the coast.

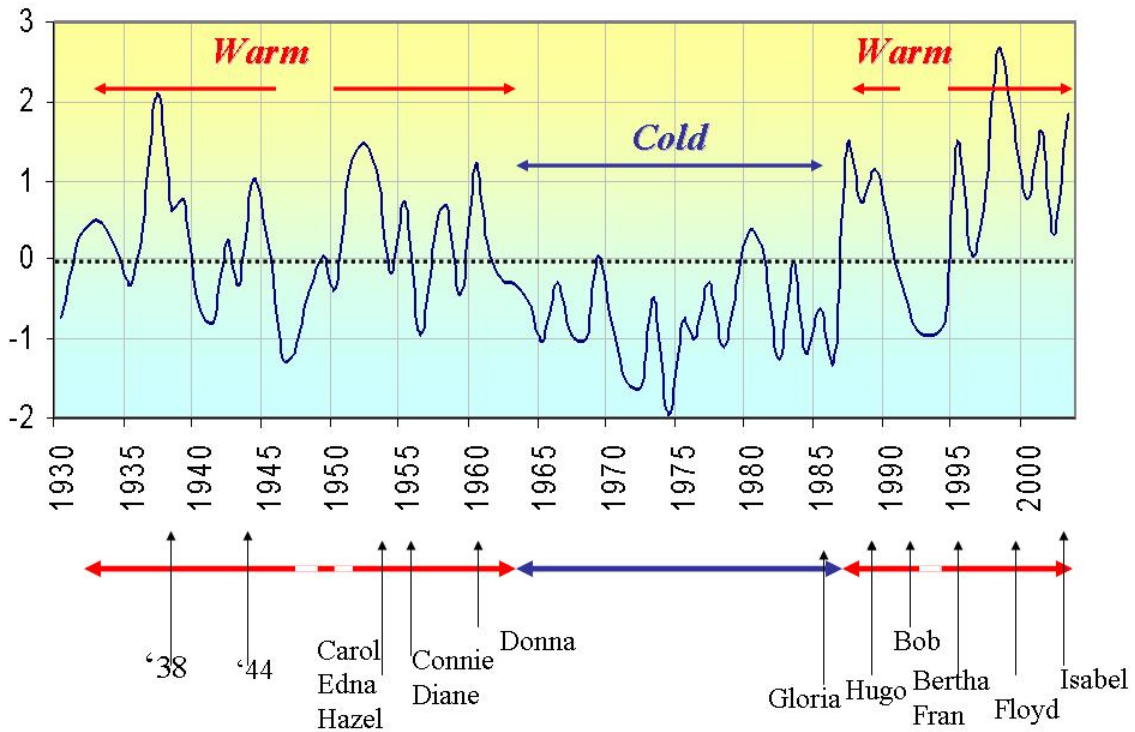
You can see in the following charts how the east coast is often a target in warm Atlantic years, especially during La Nina years.

East Coast Landfalls

REPORTS



East Coast Hurricanes and Atlantic Temperatures



La Nina Years Occurring with Warm Atlantic Summers

- 1938 Hurricane of '38 (CAT 5) New York and New England
- 1950 Hurricane Easy (CAT 3) Florida, Hurricane King (CAT 3) Florida
- 1954 Hurricane Carol (CAT 3) New York and New England, Hurricane Edna (CAT 3) New England, Hurricane Hazel (CAT 4) Mid-Atlantic and northeast
- 1955 Hurricane Connie (CAT 3) NC, VA, NY, New England Flooding, Hurricane Diane (Cat 1) NC, New England Flooding
- 1960 Hurricane Donna (CAT 4) FL (CAT 4), NY (CAT 3), New England
- 1989 Hurricane Hugo (CAT 4) SC
- 1996 Hurricane Bertha (CAT 2) NC, Hurricane Fran (CAT 3) NC
- 1998 Hurricane Bonnie (CAT 2) NC
- 1999 Hurricane Floyd (CAT 2/3) NC

15 landfalling storms in the 9 years!!!! 11 major hurricanes. 9 affected northeast

The season is not over after this week, only time will tell whether because La Nina has weakened, only Hanna will affect the east coast or whether more like Ike will follow.