

The NOAA/CIRES Twentieth Century Reanalysis (20CR) is used to explore the feasibility of a high-resolution simulation of a historical extratropical cyclone event: The New England Blizzard of 1888 (Blizzard of '88). Using the 20CR as initial and lateral boundary conditions for the Weather Research and Forecasting (WRF) model, a reasonable depiction of the cyclone is obtained, albeit displaced significantly to the north of the observed cyclone during later stages of the event. Despite the position error, the simulated storm produces heavy snowfall across New England and an intense offshore cyclone. The next step will be to explore how the Blizzard of '88 would behave in present and future climates. Here, we investigate how climate change affects the Blizzard of '88 in present and future climates. A similar process will be applied to the Storm of Century from March 1993 to provide a comparison case study. For a full comparison, the Storm of the Century will be simulated in past, present, and future climates.