Performance Measures

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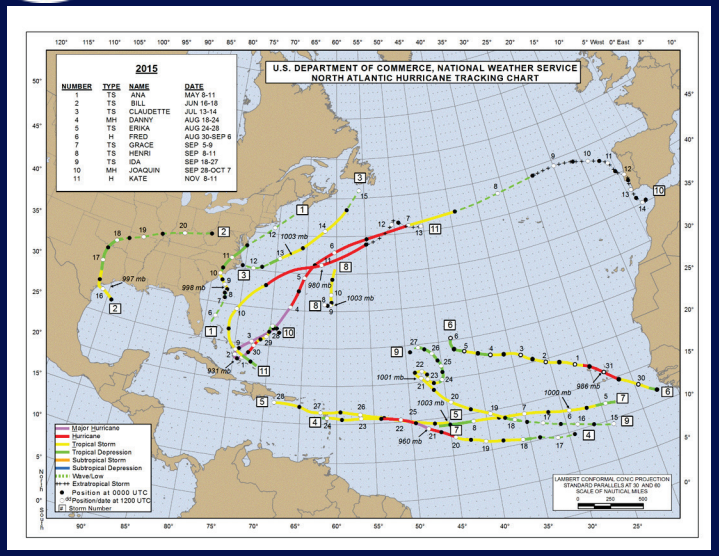
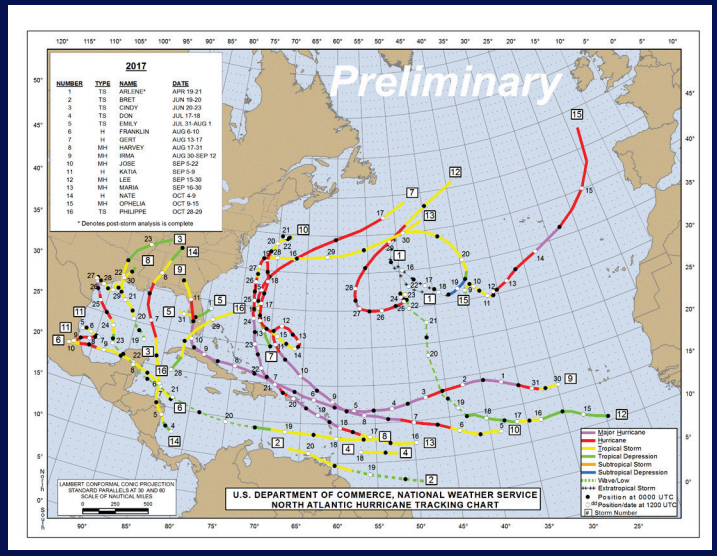
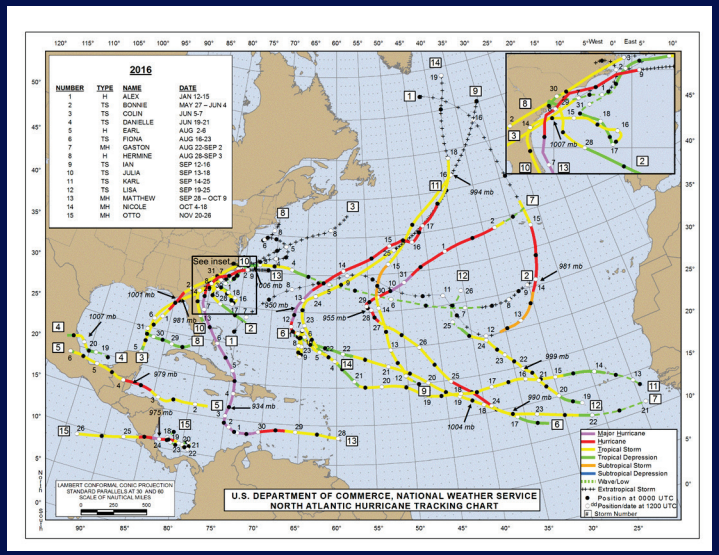
2015-2017 Atlantic Sample







2015-2017 Totals:

43 Named Storms; 21 Hurricanes; 12 Major

3 Unnamed Depressions

23 Non-Developing Invests

Annual Average:

14 Named Storms; 7 Hurricanes; 4 Major

1 Unnamed Depression

8 Non-Developing Invests

Track, Intensity Errors

- Use three-year TVCN and IVCN for mean track and intensity baselines
- Rapid Intensification Cases
  - ΔV ≥30 kt in 24 hr 8.4% (Climo = 5.9%)
  - ΔV ≥55 kt in 48 hr 6.5% (Climo = 3.9%)
  - ΔV ≥65 kt in 72 hr 5.7% (Climo = 6.8%)
- Majority of intensity errors ≥ 95th percentile are RI cases
  - Cut 95th percentile errors in half in 10 years will reduce RI errors

Wind Structure Baselines

- 34-kt wind radii mean error baseline options
  - NHC official radii forecasts
  - Model consensus forecasts
- 34-kt wind radii error distributions
  - Wind speed probability (WSP) model or P-surge values
- Radius of maximum wind (RMW) forecasts
  - Wind speed probability model forecasts
- RMW error distributions
  - WSP or P-surge

Other Baselines

- Need to develop baselines for storm surge, rainfall, and tornado hazards
- One goal is to extend real-time storm surge product availability to 72 h before arrival of TS winds – which is a more actionable time frame for evacuation decision making