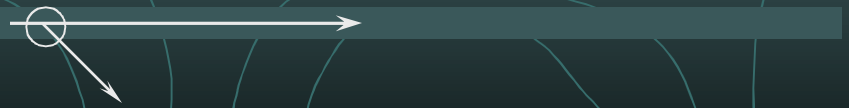
Weather or Not



Avoiding Hype And Panic When Planning Events

Gary Wilson, K2GW

What causes bad weather and how do I know it's coming?

- Differing air masses colliding with each other causes lifting (producing precipitation) or winds.
- Concept developed during WWI, thus term "fronts" is used.
- Weather Maps show the location, type and strength of these air masses.
- Computer models predict how they will move.
- These models involve massive mathematical calculations of thermodynamics and fluid dynamics.

Who does all the heavy lifting in weather forecasting?

- All weather forecasts in the US, no matter what the source, are based on NWS data and computer models. No one else can afford the hardware!
- Commercial weather enterprises just put pretty pictures on it and dumb it down.
- While nowadays slicker than Tex Antoine's cartoons or the local weather babe in a tight sweater, you're still just getting an NWS forecast with a commercial "spin" on it.
- The commercial spin is designed to make it more exciting, not more accurate!

Commercial forecast biases

- The primary purpose of a commercial broadcast outlet is to make a profit for its owners!
- The biggest local revenue source is often the local news.
- Fear of bad weather increases local news viewership and thus station advertising revenues.
- Thus any weather event anywhere within the entire range of the station gets hyped as the news teaser.
- So if Philly is to get an inch of rain but Wilkes-Barre might get six inches of snow, the nine o'clock teaser will often say “Six inches of snow possible in the area, details at eleven”.

You can avoid this bias

- Understand the forecast cycle
- Know where to get unbiased *locality specific* forecasts
- Know where to get *time specific* forecasts
- Understand the uncertainty of the forecast
- Don’t repeat what you heard about the weather from a commercial outlet until you do your homework.

The Weather Forecast Cycle

- Hourly Surface Observations
- Surface Synoptic Plotting
- Upper Air Observations at 00Z and 12Z
- Upper Air Synoptic Plotting
- Forecast Model Runs Complete by 02Z and 14Z
- Local interpretation of Forecast Model results
- Local Forecast Issued at 03Z and 15Z
- Local Forecast Updates at 09Z and 21Z

Forecast realities

- NWS naturally errs on the side of caution; weather is more often better than forecast and rarely worse.
- Snow versus rain line is hard to predict
- Snow fall depth is incredibly hard to predict
- An advisory or watch is **NOT** a warning, just a “heads up” to pay attention.

Internet Tools

- The basic starting point:
- http://www.erh.noaa.gov/er/phi/
- Click on your locale
- Look at the forecast
- Read the forecast
- Look at the hourly forecast graph for your precise location!

How good is THIS particular forecast?

- Read the Forecast Discussion
  - NWS forecasters will indicate their logic and degree of certainty behind it.
  - If the various computer forecast models agree with each other, then the forecast is very solid
  - If the models differ, then it's more subject to doubt.
- The closer the time to the event, the more accurate the forecast.

Intellicast

- WSI Intellicast
- Presents NWS maps in a logical sequence from the current synoptic through 48 hour prognostic.
  - http://www.intellicast.com/National/ForecastToday.aspx

Additional Tools

- The Weather Channel's color versions of the NWS's Synoptic and Prognostic charts
  - http://www.weather.com/maps/maptype/currentweatherusnational/index_large.html?from=wxcenter_maps

TWC Prognostic charts

- http://www.weather.com/maps/maptype/forecastsusnational/usmorningforecast_large.html?clip=undefined&region=undefined&collection=localwxforecast&presname=undefined

- http://www.weather.com/maps/maptype/forecastsusnational/usmiddayforecast_large.html?clip=undefined&region=undefined&collection=localwxforecast&presname=undefined

- http://www.weather.com/maps/maptype/forecastsusnational/useveningforecast_large.html?clip=undefined&region=undefined&collection=localwxforecast&presname=undefined

Other Government sources

- Aviation Weather Center (Really good for Prog charts)
  - http://aviationweather.gov/
- Ocean Prediction Center
  - http://www.opc.ncep.noaa.gov/
- Storm Prediction Center
  - http://www.spc.noaa.gov/products/md/
- National Hurricane Center
  - http://www.nhc.noaa.gov/
- World Meteorological Organization
  - http://www.worldweather.org/

Other Commercial Sources

- WSI Intellicast
  - http://www.intellicast.com/National/ForecastToday.aspx
- Weather Underground
  - http://www.wunderground.com/
- AccuWeather
  - http://www.accuweather.com/
- Emergency E-mail network
  - http://www.emergencyemail.org/

Three hints to avoid bugging Gary

- Don’t repeat what you heard about the weather without checking the hourly forecast for the event location.
- If I’m planning an event, assume I’m watching the REAL weather forecasts and making a reasonable decision.
- Remember most of us are not the Wicked Witch of the West and don’t melt if we get rained on.
- Follow the old Norwegian folk saying:
  - ***“There’s no such thing as bad weather, only bad clothing”***

Questions?