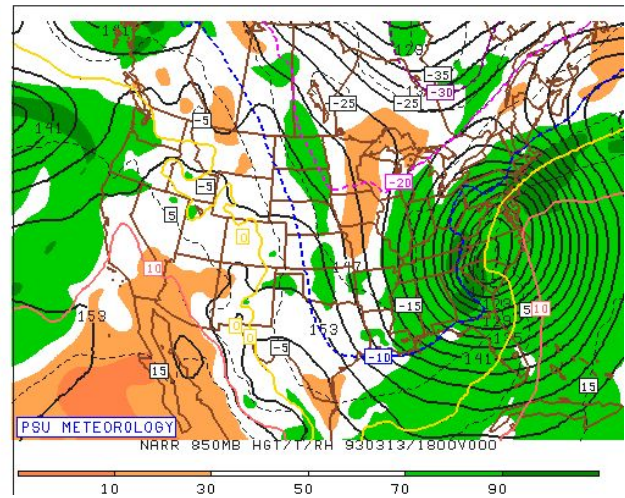
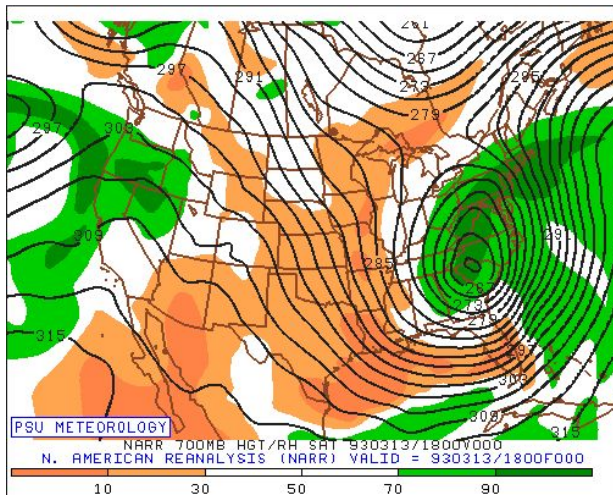
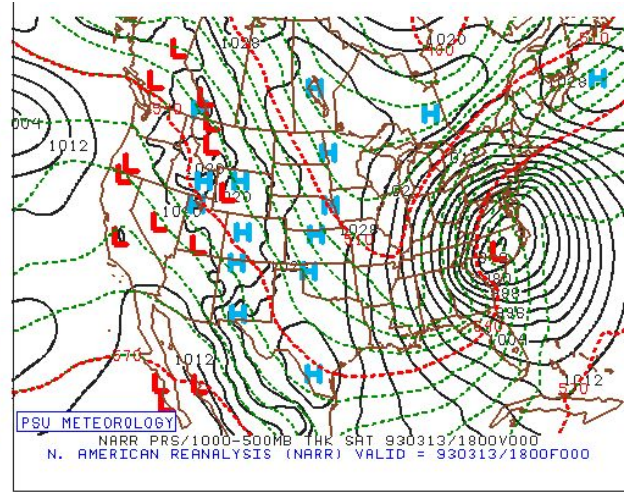
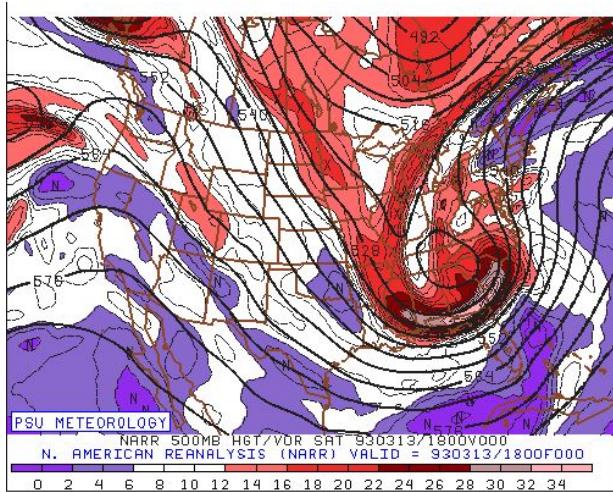


A Comprehensive List of Weather Forecasting Websites



Created by Zach Hiris (Oswego '18), Jimmy Barham (Oswego/Kansas University '17), and Jim Sullivan (Ohio University '16)

1. [Current Observations, Radar & Satellite:](#)
2. [Forecast Model Websites \(General/United States\)](#)
3. [Ensemble Guidance:](#)
4. [Tropical Weather](#)
5. [Past Weather/Climate Indices/Seasonal Information](#)
6. [El Nino Southern Oscillation \(ENSO\) & ENSO Related Links](#)
7. [Madden Julian Oscillation](#)
8. [Quasi-Biennial Oscillation \(QBO\) + Stratosphere Links](#)
9. [Link to Lake-effect BUFKIT sites](#)
10. [Link to IA State's BUFKIT Warehouse](#)

Current Observations, Radar & Satellite:

- [College of Dupage Analysis](#)
 - High resolution surface maps,
- [UCAR Real Time Weather Data](#)
 - Provides links to Satellite and Radar data, surface observations (plotted and raw METARs), upper air observations
- [Weather.Gov](#)
 - All current weather watches/warnings, links to radar and satellite data
- [SPC Mesoanalysis](#)
 - Primarily used for severe weather, but can be used year round. Most data comes from the RAP, but is very reliable. Interactive maps.
- [College of Dupage RadSat](#)
 - High resolution satellite imagery, basic radar data
- [Weather Underground](#)
 - Observations from personal weather stations across the country, nearly complete source of radar data
- [Penn State E-wall](#)
 - Also includes a ton of forecasting links, but also includes current surface observations
- [Accuweather Pro](#)
 - Includes radar, current observations, current weather graphics, etc.
Username/Password required
- [Weather Prediction Center \(WPC\)](#)
 - Previously the HPC, includes short range forecasting and surface plots
- [Unisys Sounding Data](#)

- Upper air soundings in the Continental US (and portions of adjacent Canada and Mexico) updated each day at 12z and 0z
- [SPC Sounding Analysis](#)
 - Same as Unisys link, but also includes “special soundings” (released between the standard 0z and 12z releases when the weather dictates). Also has more relevant severe weather info on the soundings (and in general looks a little nicer).
- [SPC Objective Upper Air Maps](#)
 - “Objective analysis” (computer generated) of mandatory levels based upon 0z and 12z soundings and previous NAM run. Available twice daily.
- [Unisys Mandatory Level Upper Air Maps](#)
 - Similar to SPC objective analysis, but available at more levels. Just a different way to look at similar data.
- [ADDS METARs](#)
 - Can be used to look at recent observations at one or several airports, or across a region. Can be useful for severe weather situations (where is a front located, are dew points/temperatures rising, are storms that are moving over observation sites producing strong winds, etc.)
- [NOAA EDD](#)
 - NOAA Data including DOT observation sites, real time updating. Can run very slow on some computers.
- [WeatherTap](#)
 - Password protected (Oswego has 3 accounts available), plenty of Radar products, satellite, etc.
- [Blitzortung Live Lightning Maps](#)
 - Shows almost live (~7 second delay) lightning across the entire globe. Good for tracking thunderstorms, can also use lightning trends to see if storms are weakening/strengthening or developing.
- [MeteoStar](#)
 - MeteoStar is a private company that designs software and applications for the government and private wx firms. They have many real time and model derived products available for free.

Forecast Model Websites (General/United States)

- [NCEP Model Analyses and Guidance](#)
 - NOAA’s Model page- includes GFS/NAM, WRF-NMM/ARW, 4km NAM, etc. Only American produced forecast models
- [WeatherBell.com](#)

- Premium account requires Username/Password. Likely the most complete forecasting site available. Includes full ECMWF access, climate models, etc.
- [College of Dupage Forecast Page](#)
 - Interactive maps produce Skew-t/Hodographs for each model. Easy to navigate
- [PivotalWeather](#)
 - Relatively new website with sleek graphics. Full american model suite available.
- [Earl Barker's Forecast Page](#)
 - Incredible amount of resources... if you can navigate the site. Difficult to work through, but the data available is massive
- [InstantWeatherMaps](#)
 - Rapidly updating model data. Premium accounts provide more data, but a good basic site including graphics similar to NCEP MAG page
- [SPC WRF](#)
 - Severe weather model- used and developed by the National Severe Storms Laboratory. Good for thunderstorm forecasting during storm season. Other WRF runs for specific regions can be found [here](#)
- [SPC SREF](#)
 - Short range ensemble with a variety of probability graphics. Used all year round, with an added emphasis for severe weather
- [SPC HRRR Viewer](#)
 - Potentially useful in severe weather situations.
- [Meteocentre Cyclone Tracking](#)
 - Useful to compare where forecast models track low pressure systems
- [Meteocentre Models](#)
 - Be sure to click English for the language. Not the best user interface, but has UKMET data and also updated GEM model data fairly quickly. Needs to be on a browser that can translate from French
- [Plymouth State Model Maps](#)
 - Can create custom layered maps. Main page for Plymouth State is available [here](#)
- [WeatherOnline Expert Charts](#)
 - Primarily a United Kingdom based site, but also produces graphics for the US for a variety of forecast models
- [University of Wyoming Forecast Page](#)
 - Slightly outdated, but still can produce custom graphics for the NAM/GFS
- [Tropical Tidbits](#)
 - Fairly comprehensive site, has most global models and mesoscale models.
- [Penn State E-Wall:](#)
 - GFS: [0z](#), [6z](#), [12z](#), [18z](#). NAM: [0z](#), [6z](#), [12z](#), [18z](#). [Hi-res models \(including HRRR\)](#)

- There are many other models/parameters available on the E-Wall that I did not list, if you get curious I'd encourage you to check them out.
- [TwisterData](#)
 - They literally haven't updated anything on this site in at least 5 years, HOWEVER, produces a number of useful maps for the NAM, GFS and RAP runs including point and click soundings. Especially useful for severe weather forecasting but has application for all forecast issues.
- [HRRR- New York State grid](#)
 - HRRR grid focused on Albany, NY. Grid includes Oswego and can be used for local temps/winds. Also has a floating grid over the current WxChallenge city.
- [Penn State Eyewall](#)
 - Collaborative effort between the NWS/PSU/FSU with more advanced model forecast output. Not all links work on the site. Not sure if page is supposed to be operational
- [HRRR-NOAA Earth System Research Laboratory](#)
 - Multiple HRRR configurations along with domains to increase map resolution for forecast location. Useful with convective situations and Lake Effect (meso/micro scale level features). Can get model data every 15 min for very high resolution 15 hours out. Click the Home Info Page in the top left to learn more about the model.
- [MeteoStar Models](#)
 - Current only GFS and NAM are available but the looping software is very user friendly with easy to read graphics. MeteoStar is who provides the model viewing software for the LEADS software and products utilized by the Air Force and Navy Weather community.
 - [They also have graphical MOS guidance, just enter the ICAO location](#)

Ensemble Guidance:

- Several of these links will be to sites already listed above in other sections, however, this is to specific ensemble guidance on those sites.
- GFS Ensembles: [Tropical Tidbits](#), [E-Wall](#), [COD \(click on "GEFS"\)](#), NCEP ([here](#) & [here](#)), [MeteoCentre](#). Note: Tropical Tidbits will not update to the current run, double check the run time!
- Euro Ensembles: [Tropical Tidbits](#), [ECMWF](#) (be sure to change region).
- Canadian (GEM/CMC) Ensembles: [MeteoCentre](#), [E-Wall](#)
- SREF: [SPC Viewer](#), [Plumes \(via SPC\)](#) (be sure to change station), [E-Wall](#), [NCEP](#), [WPC Winter Weather SREF Derived Products](#), [COD](#) (Click "SREF"), [Eyewall \(Alt. PSU\)](#)

Tropical Weather

- [National Hurricane Center](#)
- [Tropical Tidbits](#)
 - This portion of the website displays current satellite imagery, current NHC forecast, and current model forecasts (Spaghetti track plots from the ATCF and GEFS and intensity guidance).
- [CIMSS Tropical Cyclones](#)
 - Fairly comprehensive site containing satellite derived products including wind shear, steering currents, vorticity and also intensity estimates using the advanced Dvorak technique.
- [Recon Data](#) (via Tropical Tidbits)
- [Tropical Cyclone Genesis](#)
 - From Florida State, uses climatology to predict the chances of Tropical Cyclone genesis
- [UWM](#)
 - Track and intensity model guidance. Also, the ability to download files for viewing in Google Earth
- [GOES Floater Imagery](#)
 - Storm specific conventional (visible, IR, water vapor) satellite images
- [Navy/NRL Tropical Cyclone Page](#)
 - Storm specific satellite images (including microwave imagery)
- [Joint Typhoon Warning Center](#)
 - Issues tropical cyclone forecasts for systems outside of the Atlantic or East Pacific
- [Central Pacific Hurricane Center](#)
 - Issues tropical cyclone forecasts for systems between 140W and the Dateline in the North Pacific
- [Penn State E-Wall](#)
 - Includes shear, steering currents, satellite data, and many other helpful tools
- [Tropical Cyclone Phase](#)
 - Useful for tracking subtropical vs. tropical storms, also shows tracks of the storms. Shows how deep of a warm core a system has
- [Probabilities of Landfall](#)
 - Uses historical data to determine the probability of a Tropical Cyclone making landfall over particular areas
- [GEFS Tropical Weather Forecasts](#)
 - From Florida State University
- [Model TC Genesis](#)

- From Florida State University. Even more links from FSU available through Hart's page [here](#)

Past Weather/Climate Indices/Seasonal Information

- Daily US Surface/Upper Air Observations
 - [SPC Mesonalysis Archive \(2005-Present\)](#)
 - Hourly Mesoanalysis from SPC
 - [NARR \(Penn State Reanalysis\)](#)
 - Daily, 4x6hr charts. Includes 500mb vorticity, 850/700mb temps/humidity/heights, and sfc maps. Goes back to the late 70s/80s.
 - [WPC Daily Forecast Maps](#)
 - Daily WPC produced graphics from 2002-Present
 - [UCAR Case Study Site](#)
 - Great source of archived data, can be used for case study/research projects
- National Datasets
 - [ESRL- US Temp/Precip Analysis](#)
 - [ESRL- NH 20th Century Reanalysis](#)
 - Includes extensive upper air data, including 500mb height anomalies, upper level temperature data, etc. Able to specify regions
 - [ESRL- Daily Composite Reanalysis](#)
 - Similar to the 20th Century Reanalysis, but for specific days. Time range covers Jan. 1948-Present
 - [ESRL Daily Composites \(Old\)](#)
 - Same as above link, but for data starting in the mid 1800s-2012
 - [Northeast Regional Climate Center](#)
 - Daily/Weekly/Monthly temperature and precipitation data for the Northeast US
- United States Climate Data
 - Each NWS office has their own climate records. For example, NWS Buffalo has their archive online [here](#).
 - [Utah State Climate Center- Archived Data](#)
 - Includes Co-op, official NWS observations, and other stations for various years across the U.S. Most data is available on a daily basis, rather than summarized monthly statistics.
- Climate Indices
 - Daily NAO/PNA/EPO, etc.
 - [Daily Forecasts](#)

- [CPC Daily Forecast](#)
- Monthly AO/NAO/PNA/Etc.
 - [Master List](#)
 - [Arctic Oscillation](#), [NAO](#), [PNA](#), [EPO](#), [PDO](#) + [PDO \(alternate\)](#) [QBO](#)
- Seasonal Forecasting
 - [Linear Correlations in Atmospheric Seasonal/Monthly Averages](#)

El Nino Southern Oscillation (ENSO) & ENSO Related Links

- Current ENSO Conditions
 - [Monthly MEI Values](#)
 - Monthly values from 1950-Present
 - [CPC ENSO Home](#)
 - Home for CPC, includes several other current conditions
 - [ESRL SST Page](#)
 - Current SSTs, SSTa, etc.
- SSTanom Model Forecasts
 - [CFS Seasonal Forecasts](#)
 - [Korean Met. Agency ENSO Forecasts](#)
 - [ECMWF ENSO Plumes](#)
 - [IRI Enso Plumes](#)
 - Seasonal ENSO forecasts from both statistical and dynamic models
- Historical ENSO Conditions
 - [KNMI Climate Explorer](#)
 - Monthly time series, percentiles for each individual ENSO region. Also includes additional information on other climate indices
 - [Weekly SSTa Values](#)
 - Weekly SSTa values for each ENSO region 1990-2012
 - [CPC Historical Information](#)

Madden Julian Oscillation

- General Information
 - [CPC Factsheet](#)
 - [MJO Wiki Link](#)
- Forecast Information
 - [CPC Homepage](#)
 - [MJO - Temperature Correlations](#)

- Every MJO Phase Temp Correlation in the United States, on 3-month cycles (DJF, JFM, etc.)
- [MJO - Precip Correlation](#)
 - Same as above, but precip. Note that both Temperature and precip aren't always strongly correlated to MJO phases

Quasi-Biennial Oscillation (QBO) + Stratosphere Links

- General Information + Forecasts
 - [Monthly QBO Values](#)
 - 1950 - Present
 - [CPC Stratosphere Monitoring](#)
 - Temperature, U-wind times series. Both raw and anomalies available for use in QBO diagnostics, SSWEs.
 - [Stratospheric Diagnostics](#)
 - ECMWF Forecasts D1-D10 from 150mb-1mb. Isentropic maps also available. Useful for SSWE events