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Assignment 1

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Atmospheric Sciences 529

Useful Data Source

For the first assignment of the class we were tasked with the goal to find a useful data source that can be widely used for the class. The MESOWEST site, which is operated by the University of Utah, provides a user with a map that contains all of the CWA's (County Warning Areas) for the National Weather Service in which data can be obtained. Data for a desired area can be obtained by clicking somewhere on the map and then selecting a site within the presented area. The variables for each of the data stations depend on the sophistication of the equipment at each of the sites. Some will give only temperature and humidity, while others will allow a person to obtain many variables for atmospheric studies. The sites within the database consist of National Weather Service sites, SNOTEL sites and other data sources. One of the better parts of the site is the ease at which the data can be downloaded and viewed. The site creates the desired files in text or excel format, which are then easy to manipulate for most people rather than other files which takes computer programming skills to view and manipulate. Data can be downloaded by monthly data periods once a person completes the free registration process.

In the past I have used the data to complete a snowfall survey that examined the water to snow ratio in the Appalachian Mountains in the eastern part of the country. Another part of the study was to show the enhancement of orographic uplift within the mountains by choosing low elevation and high elevation sites and then comparing the amount of snowfall received by the reporting stations. I feel this data source is great for short term periods of study such as daily, weekly or monthly studies, but the major downfall is the ability to only obtain monthly chunks of data at one time so then the user must mesh the data to obtain larger periods of time. This data source is very useful when it comes to examining close to real-time measurements for such uses as forecasting peak flow events for a given region. I feel this site will be very useful data source when a person is trying to complete a study for point locations across the United States. MESOWEST shows many of the available mesonet sites for the country and allows people to download archived data for certain periods of time depending on the location.

Website Link:

<http://mesowest.utah.edu/index.html>