**WEATHER GLOSSARY**
**Air Mass**- A large body of air that has similar temperature, pressure, and moisture characteristics

**Air Pressure**- (atmospheric pressure) air pressure is the force exerted on a surface by the weight of the air above it. (Remember the “pig pile” idea—what’s it feel like to be on the bottom?)

**Aquifer -** Groundwater reservoir (where water naturally pools underground).

**Arctic Air**- a mass of very cold, dry air that usually originates over the Arctic Ocean north of Canada and Alaska

**Atmosphere**- The mass of air surrounding the earth and bound to it more or less permanently by the earth's gravity

**Barometer** - An instrument for measuring atmospheric pressure

**Cloud -** A visible cluster of tiny **water** **droplets** and/or ice particles in the atmosphere

**Cumulus Cloud -** A cloud in the shape of individual detached domes, with a flat base and a bulging upper portion resembling cauliflower

**Climate -**  The prevalent long term weather conditions in a particular area. Climatic elements include precipitation, temperature, humidity, sunshine and wind velocity and phenomena such as fog, frost, and hail storms. Climate cannot be considered a satisfactory indicator of actual conditions since it is based upon a vast number of elements taken as an average.

**Climate change-** This strictly refers to all forms of climatic inconsistency.  But it is often used in a more restricted sense to imply a significant change. Within the media, climate change has been used along with *global warming*. Scientists, however, use the term in a wider sense to include past climate changes also.

**Cold Front -** A narrow transition zone separating advancing colder air from retreating warmer air. The air behind a cold front is cooler and typically drier than the air it is replacing.

**Condensation -** The process by which water vapor becomes a liquid; the opposite of evaporation, which is the conversion of liquid to vapor

**Conduction** - The transfer of heat by molecular action between bodies that are in contact

**Convection** - The transfer of heat within the air by its movement.   The term is used specifically to describe vertical transport of heat and moisture, especially by updrafts and downdrafts in an unstable atmosphere.

**Coriolis Force -** An apparent force caused by the rotation of the Earth. In the Northern Hemisphere winds are deflected to the right, and in the Southern Hemisphere to the left.

**Dew Point -** The temperature to which the air must be cooled for water vapor to condense and form fog or clouds

**Drought -** Abnormally dry weather in a region over an extended period   sufficient to cause a serious hydrological (water cycle) imbalance in the affected area. This can cause such problems as crop damage and water-supply shortage

**el Ni****ño -** A major warming of the equatorial waters in the eastern Pacific Ocean. El Niño events usually occur every 3 to 7 years, and are related to shifts in global weather patterns. (Spanish for the "Christ Child", named this because it often begins around Christmas.)

**Evaporation** - the process of a liquid changing into a vapor or gas

**Fog** - Water that has condensed close to ground level, producing a cloud of very small droplets that reduces visibility to less than one km (three thousand and three hundred feet)

**Hail -** Precipitation in the form of balls or irregular lumps of ice produced by liquid precipitation, freezing and being coated by layers of ice as it is lifted and cooled in strong updrafts of thunderstorms

**High -** An air mass of high pressure, made up of colder, and dryer air

**Horse Latitudes** - Subtropical regions where anticyclones produce calm weather

**Humidity -** The amount of water vapor (moisture) in the atmosphere

**Jet Stream -** Strong winds concentrated within a narrow band in the upper atmosphere.   It normally refers to horizontal, high-altitude winds. The jet stream often "steers" front and low pressure systems.

**Low -** An area of low air pressure with warmer and higher humidity (moisture)

**Meteorology -** The study of weather dynamics of the atmosphere

**Monsoon -** A persistent seasonal wind, often responsible for prolonged rains. Parts of southern Asia, Africa, and the southwest US experience an annual monsoon season.

**Occluded Front -** A complex frontal system that occurs when a cold front overtakes a warm front.

**Overcast -** Sky condition when greater than 9/10 (90%) of the sky is covered by clouds.

**Partly Cloudy -** Sky condition when between 3/10 and 7/10 of the sky is covered.   Used more frequently at night.

**Polar Air -** A mass of very cold, very dry air that forms in polar regions.

**Precipitation -** Liquid or solid water that falls from the atmosphere and reaches the ground (rain, drizzle, snow, hail).

**Prevailing Westerlies -** Winds in the middle latitudes (approximately 30 degrees to 60 degrees) that generally blow from west to east

**Radiation -** Energy emitted in the form of electromagnetic waves. Radiation from the Sun has a short wavelength (ultra-violet); it re-radiates from the Earth’s surface as longer wavelength infrared

**Stationary Front** – When cold and warm air masses do not move; drizzle/rain at boundary can last for days

**Storm Surge -** A rise of the sea level along the shore that builds up as a storm (usually a hurricane) moves over water. It is a result of the winds of the storm and low atmospheric pressures.

**Sublimation** – When a solid changes to a gas without a liquid phase: Snow can sublimate directly to vapor without melting as a liquid first.

**Tornado -** A violent rotating column of air, in contact with the ground, pendant from a cumulonimbus cloud. A tornado does not require the visible presence of a funnel cloud.

**Typhoon -** A hurricane that forms in the Western Pacific Ocean

**Warm Front -** A narrow transitions zone separating advancing warmer air from retreating cooler air. The air behind a warm front is warmer and typically more humid than the air it is replacing.

**Weather -** State of the atmosphere with respect to heat or cold, wetness or dryness, calm or storm, clearness or cloudiness. It includes temperature, pressure, humidity, clouds, wind, precipitation and fog