FOSS Weather and Water Vocabulary

Defined Term	Your Take
Air mass: A large body of air that has uniform temperature and humidity. Air masses have distinct boundaries and can extend hundreds or thousands of kilometers over Earth's surface.	
Air: The mixture of gases surrounding Earth and forming its atmosphere.	
Air pressure: The force exerted on a surface by the weight of the air above it; also called atmospheric pressure.	
Anemometer: An instrument used to measure wind speed.	
Atmosphere: The layer of gases that surrounds a planet or star.	
Axis: An imaginary line around which Earth spins or rotates.	
Barometer: An instrument used to measure air pressure.	
Climate: A pattern of weather conditions over a period of many years or centuries.	
Cloud: A visible accumulation of water on condensation nuclei, either as liquid or ice, usually high in the air.	
Compass: An instrument used to determine direction.	
Condensation nucleus: A small particle on which water vapor condenses.	
Conduction: The transfer of energy from one place to another by contact.	
Convection: Movement of a fluid, such as air, that transfers heat from one place to another.	
Dew: Water that condenses on surfaces when the temperature drops below the dew point.	
Dew point: The temperature at which a volume of air is saturated with water vapor; condensation occurs when the temperature drops below the dew point.	
Downburst: A severe localized downdraft from a thunderstorm, causing damaging winds at or near Earth's surface.	
Drought: Less than normal precipitation over a long period of time.	
Dust storm: A condition in which strong winds carry dust over a large area, usually during drought conditions.	
Energy: The ability to do work.	

Equinox: When the Sun appears overhead at the equator and day and night is equal length everywhere. Equinox happens twice a year on about March 21 and September 23.	
Evaporation: The process in which liquid water becomes water vapor.	
Exosphere: The outermost layer of the atmosphere, where the atmosphere makes the transition to space.	
Flash flood: A short, rapid unexpected flow of water, often caused by intense, heavy rainfall.	
Fluid: A substance that flows or takes the shape of its container.	
Front: The leading edge of a moving air mass.	
Frost: Frozen dew. Frost forms when the dew point is below 0°C.	
Glacier: A large, slowly moving sheet of ice.	
Global wind: Wind that affects large sections of Earth, such as trade winds.	
Greenhouse effect: The heating of the atmosphere by trapped solar radiation.	
Groundwater: The water in soil and porous rocks underground.	
Hail: Precipitation in the form of balls of ice.	
Heat: A form of kinetic energy that raises the temperature of a substance.	
Humidity: The water vapor in the air.	
Hurricane: A cyclone or moving wind system that rotates around an eye.	
Hygrometer: An instrument used to measure relative humidity.	
Ionosphere: A layer of the atmosphere within the thermosphere; noted for its large number of electrically charged ions. The aurora borealis and australis, or northern and southern lights, form in the ionosphere.	
Kinetic energy: Energy of motion.	
Latitude: The distance north or south from the equator, measured in degrees.	
Lightning: A visible electric discharge produced by thunderstorms.	
Mesosphere: The layer of the atmosphere above the stratosphere, in which temperature decreases and meteors burn up when approaching Earth.	

Meteorologist: A scientist who studies the causes and effects of Earth's weather.	
Meteorology: The study of day-to-day weather conditions in the troposphere and lower stratosphere.	
Nitrogen: The most abundant gas in Earth's atmosphere (N2). Nitrogen is stable, meaning it doesn't react easily with other substances.	
Oxygen: A colorless, odorless, tasteless gas; the second most abundant gas in Earth's atmosphere (O2).	
Radiation: Energy that is radiated or transmitted through space in the form of rays, waves, or particles.	
Relative humidity: The amount of water vapor in the air compared to the amount of water vapor needed to saturate the air at a given temperature; expressed as a percentage.	
Revolution: The motion of one celestial body (such as Earth) around another (such as the Sun).	
Rotation: The spinning of a celestial body, such as Earth, about its axis.	
Season: A period of the year marked by the equinoxes and solstices or by atmospheric conditions.	
Solar energy: The radiant energy of the Sun, which can be converted into other forms of energy, such as heat or electricity.	
Solstice: The point in the path of the Sun at which the Sun is farthest north or south of the equator. Solstice happens twice a year on about June 21 and December 21.	
Stratosphere: The layer of the atmosphere above the troposphere; contains a layer of ozone, but almost no moisture or dust.	
Temperature: A measure of the average kinetic energy of the molecules in a material.	
Thermometer: An instrument used to measure temperature.	
Thermosphere: The thin layer of the atmosphere above the mesosphere, in which temperature may reach more than 1500°C.	
Thunder: The explosive sound that usually accompanies lightning.	
Tilt: Slant.	
Tornado: A rapidly rotating column of air that extends from a thunderstorm to the ground. Wind speeds can reach 417 kilometers per hour or more in a tornado.	

Troposphere: The layer of the atmosphere next to Earth's surface, in which we live and in which weather takes place.	
Typhoon: A Pacific cyclone north of the equator and west of the international dateline.	
Water cycle: The circuit of water movement from the oceans to the atmosphere to Earth's surface and back to the atmosphere through various processes, such as precipitation, runoff, infiltration, storage, evaporation, and transportation.	
Water vapor: The invisible, gaseous form of water.	
Weather: The state of the atmosphere at a given time, including temperature, humidity, cloud cover, precipitation type, etc.	
Weather balloon: A balloon made of a thin membrane of rubber used to carry a radiosonde into the stratosphere.	
Weather factors: Properties of air that affect weather, including temperature, humidity, pressure, and wind.	
Wind: Movement of air.	