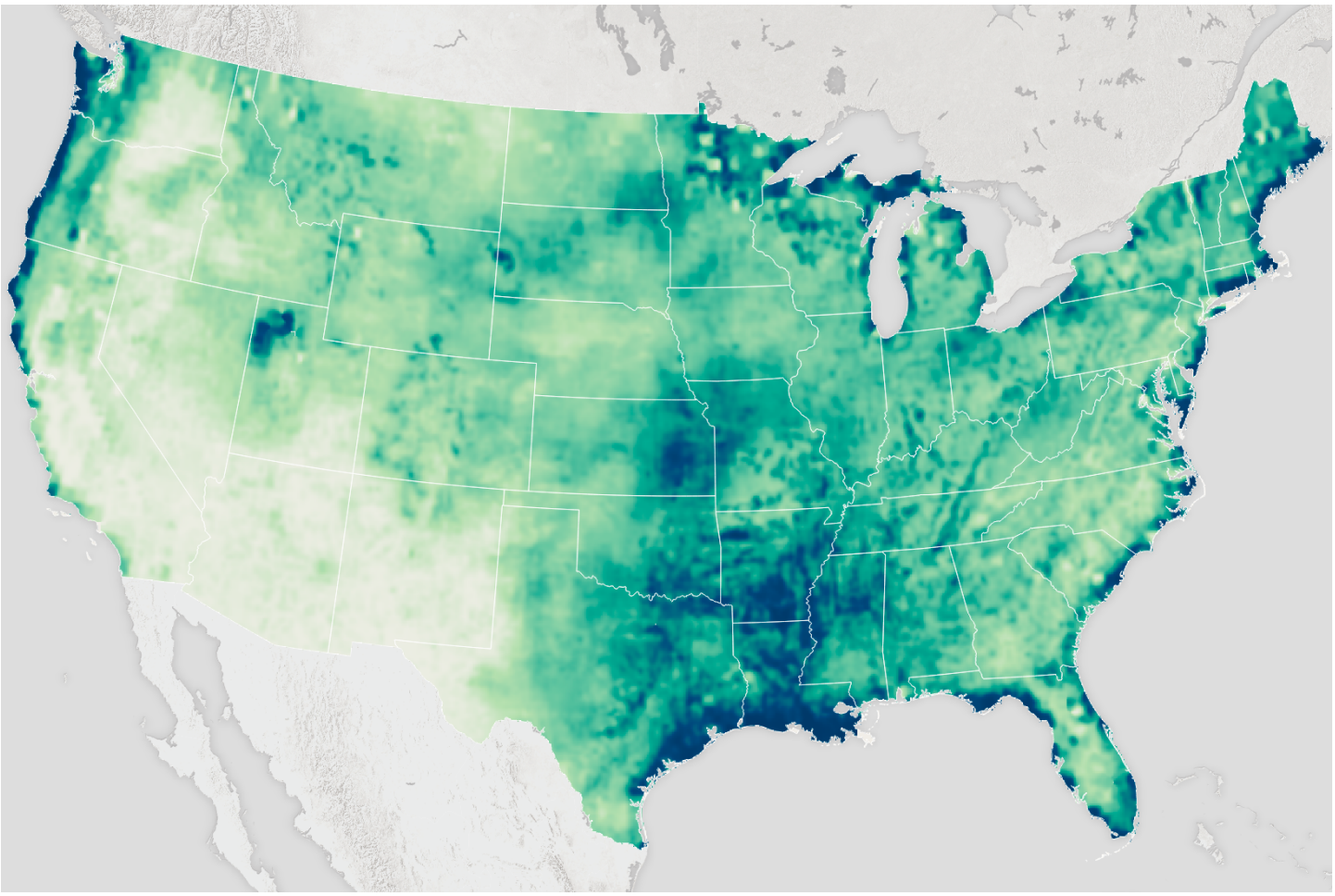
Soil Moisture



Soil moisture is the water that is held in the spaces between soil particles, generally in the upper 10 cm of soil. Although soil moisture is just a fraction of the total water mass in the water cycle, this small amount of water plays a critical role in evaporation and plant transpiration processes in the Hydrosphere, Biosphere, and Geosphere. It is a key variable in controlling the transfer of water and heat energy between these systems. Additionally, soil moisture plays a critical role in the amount of precipitation that runs off into nearby waterways, affecting flooding potential. Soil moisture data are frequently used for agricultural purposes such as crop yield prediction, water reservoir management, drought prediction, and irrigation management. Computer models of soil moisture and weather processes improve the characterization and forecasting of surface soil moisture, vegetation, and temperature.