

Drones, wireless sensors take water research to new level



Researchers in Merced a site owned by the University of California. Photo/University of California

By Matt Weiser, Water Deeply

California is about to learn a whole lot more about how water moves through its many diverse landscapes.

The Gordon and Betty Moore Foundation has awarded a \$2.2 million grant to the University of California to use remote sensors and drones to monitor hydrology across various landscapes. The subject areas will be the U.C.'s Natural Reserve System, a network of protected lands covering more than 750,000 acres and representing many habitat types in the state.

Called the California Heartbeat Initiative-Freshwater, the project will equip reserves with wireless sensor nodes to track weather, soil moisture, transpiration and a host of other criteria. Each node, about the size of a thermos, is outfitted with a battery and solar panel. They communicate

wirelessly with each other and a central computer. Drones will fly programmed routes with special cameras attached to monitor how vegetation changes with the climate.