

California Department of Food and Agriculture
2014 rd2 State Water Efficiency and Enhancement Program
Projects Selected for an Award of Funds
Updated 10/14/19

Agriculture Operation	Project Description	County	Grant Award
3R Land and Development	Conversion from furrow irrigation to drip. Installation of two cell modem electric soil moisture sensors that will provide moisture readings. Replace the existing flood irrigation application with a precision low volume drip system.	Tulare	\$122,885
A&J Family Farms Inc.	Installation of soil moisture stations, inline pressure sensors, and flow meters throughout the orchard and pump stations; connected through telemetry. Utilization of irrigation scheduling. Re-bowling the old pump and installing a new filter.	Butte	\$30,860
Alex Ortiz	The installation of a soil moisture station, inline pressure sensors, and flow meters throughout the orchard and pump stations; connecting these monitoring devices through telemetry. Conversion from a solid set sprinkler system to drip.	Glenn	\$52,806
Aline's Vineyard	Implement the use of Hortau's advanced irrigation management.	San Luis Obispo	\$33,920
Almont Orchards Inc.	Install 12 soil moisture stations and 11 pump monitoring stations; for electric pumps remote On/Off will be available via software.	Butte	\$78,083
Altman Plants	Upgrade and enhance the existing (20 year old) recycling system by increasing the capacity, improving the treatment of water so that it can be used on more crops, eliminating the lost water, and improving the overall energy efficiency of the system.	San Diego	\$125,235
American Farms, LLC	The scope of the project application involves removal of 100 HP electric powered turbine and 192 HP diesel HP powered booster pump and replaced with 190 HP natural gas powered booster pump, sprinkler to drip tape conversion and installation of soil moisture monitoring hardware.	Monterey	\$150,000
Ann B. Montgomery 2007 Trust	Install three soil moisture stations and two pump monitoring stations.	Butte	\$18,504
Ann B. Montgomery Farms L.P.	The installation of soil moisture stations, inline pressure sensors, and flow meters throughout the orchard and pump stations. By connecting these monitoring devices through telemetry it will ensure proper use and oversight of their irrigation, and irrigation system.	Butte	\$41,403
Ben J Schroeder	Utilize Hortau's real-time irrigation management for 910 acres of almonds. Place soil probes at 3 different depths- 12", 18" and 24".	Kern	\$145,424
Bernadette Davis	Convert from furrow/flood irrigation to drip irrigation system	Fresno	\$26,510
Bertagna Custom Farming, Inc.	Conversion of current irrigation system of solid set sprinklers to micro-jet sprinklers fed by plastic tubing through the current solid set pipe. Pumping systems will be equipped with flow meters and pressure sensors(pre and post file). Installation of a soil moisture stations; relayed through a telemetry system allowing for accurate data records and easy real time access	Butte	\$49,000
Borzini Farms, Inc	The scope of the project application involves removal of 3 diesel engines, replaced by electric power pumping stations. This project includes the installation of soil moisture monitoring hardware.	Monterey	\$150,000
Brandon Chapla	The installation of soil moisture stations, inline pressure sensors, and flow meters throughout the orchard and pump stations. By connecting these monitoring devices through telemetry it will ensure proper use and oversight of their water. Through implementation of IWM level 3 water management, Brandon Chapla will be better equipped to determine the pump run-time, flow rates, in-line pressure, and soil moisture condition. All of these will lead to more efficient conservation and application of water, which directly relates to the emission of greenhouse gas through pump use.	Butte	\$40,147
Channel Islands Berry Farms, Inc	Install Hortau's real-time irrigation management for 118 acres raspberries, 44 acres of strawberries and 4 acres of avocados. Will place soil probes at 2 different depths - 6" and 12". This will allow Channel Islands Berry Farms to be sure that they are getting lateral distribution of the water within the given soil profile.	Ventura	\$103,804
Clark Bros. Farming	Install underground drip system on row crop ground. Sand media filters, mainline, and drip hose plus installation. Will allow for more efficient irrigation, water savings, power savings, and minimize tillage of ground	Fresno	\$150,000
Clarksburg Vines	Clarksburg Vines is installing a vineyard on a field where alfalfa is currently farmed. Installation of drip irrigation and Ranch Systems' Soil Moisture Sensors, Weather Station & Irrigation Control System.	Yolo	\$112,670
Collin's Vineyards	Install Hortau equipment to measure soil tension to help manage irrigation to reduce water and energy use.	San Luis Obispo	\$77,199

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Colusa Indian Community Council	Installation of orchard moisture monitoring system.	Colusa	\$89,600
Crane Mills	Upgrade fifteen pumps with flow meters and pressure sensors connected through a telemetry network. Install a soil moisture station, which includes a soil moisture probe, pressure sensor, and will be connected to the telemetry network for accurate record and easy access to live data.	Tehama	\$46,350
Creston Valley Vineyards	Install 16 Hortau irrigation management stations to measure to the root zone and not over water, track weather and trigger frost alerts.	San Luis Obispo	\$118,638
Jason Bertagna	Installation of soil moisture stations, in-line pressure sensors, and flow meters.	Butte	\$15,721
Eade Ranch Management Inc	Installation of 31.5 KW Solar PV system and weather and soil moisture monitoring will be implemented on 105 acres.	Monterey	\$150,000
F & D Giacomazzi Farms	Retrofit existing flood irrigated almond trees with Variable Rate Drip Irrigation systems. This system includes ground penetrating sonar produced soil variability maps, a system designed to irrigate each soil type zone based on ET and soil type/permeation, variable rate fertilizer, variable speed drive on electric pump, soil moisture probes, and weather station. Include both double line drip irrigation and micro sprinklers. The drip hose will be used for efficient water usage and the micro sprinklers will be used for dust management during harvest periods. Winter cover crops. 1 mW Solar System.	Tulare	\$150,000
Flight Investment, Inc	Installation of weather and soil moisture monitoring hardware on a 41 acre vineyard. An irrigation scheduling management plan will be implemented based on soil moisture and evapotranspiration data.	San Luis Obispo	\$3,246
Gary Dutro Orchards LLC	Install 4 soil moisture stations and 4 pump monitoring stations.	Tehama	\$31,420
Gill Ranch Company LLC	Project involves a fuel switch of a diesel powered booster pump to an electric powered booster pump at three pumping stations. This project includes the conversion of 60 acres from sprinkler to drip along with the installation of soil moisture monitoring hardware on 280 acres near King City, CA. 400 Amp electrical service upgrades will be required at each pumping station.	Monterey	\$90,000
Grivey Brothers, Inc.	50 KW solar generating facility will provide power to the irrigation pump. Conversion of 12.6 acres of almonds from flood to sprinkler irrigation.	Glenn	\$150,000
Hahn	Install two soil moisture stations and one pump monitoring station. The soil moisture station includes an Enviro-Pro Lite 120cm soil moisture probe, a in-line pressure sensor, and it connected through a telemetry network to allow for easy, real time data access and record. The pump station will be fitted with one McCrometer Mag Meter which will allow for an accurate flow rate display and better nutrient management through proportional injection. The pump station will have two pressure sensors before and after the filter. The pump station will also be linked to the telemetry system to allow for easy, real time data and record access.	Glenn	\$15,721
Haleakala Ranch	Monitor crop stress with soil sensors and data management software. This system will allow Haleakala Ranch to use less water, less energy, eliminate fertilizer and pesticide leaching and manage crop stress in real time by mobile device or phone.	Tehama	\$123,261
Hammond Vineyards L.P.	Installation of weather and soil moisture monitoring hardware on a 149 Acre and on a 57 acre vineyard in Paso Robles, CA. Each vineyard will receive two soil moisture probes and one temperature/relative humidity sensor. An irrigation scheduling management plan will be implemented based on soil moisture and site-specific evapotranspiration data.	San Luis Obispo	\$12,575
Ira Compton	Replace a hand-move sprinkler system with a micro-jet sprinkler system fed by plastic tubing. The installation of a soil moisture station that measures the soil moisture and the in- line pressure. Equipping the current 30HP electric turbine pump with a flow meter and 2 pressure sensors. All of these monitoring devices will be connected through a telemetry network to allow for accurate record and easy access to live data.	Butte	\$25,564
Jacob's Farm	Modifications include: flow meters on three ground water wells, data loggers connected to the flow meters, backflow devices, in-field soil moisture probes, Initiation of ETo-based irrigation scheduling, and replacement of sprinkler heads for improved distribution uniformity.	Santa Cruz	\$40,166

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JJB Farms	Improve pump system by adding a flow meter and pressure sensors on both sides of the filter. The data will be relayed through a telemetry network. Converting diesel pumps to electrically powered pump stations fully equipped with variable frequency drives, flow meters, and pressure sensors (pre and post filter). Install soil moisture stations which include a soil moisture probe and in-line pressure sensor. All of these devices will be linked through a telemetry system to allow for easy, real time access, and record keeping.	Yolo	\$139,482
JMAD Enterprises, LLC	Eliminate diesel motor and install Variable Frequency Drive pump. Add moisture probes and Weather station.	Merced	\$52,053
KG Vineyard Management	Conversion of furrow irrigated vineyard to drip irrigation to save water.	San Joaquin	\$54,983
Legacy Growers, LLC	Replacement of 4565 feet of 14 inch concrete irrigation pipeline and 3303 feet concrete irrigation pipeline with 5860 feet of 10 inch PVC, 720 feet of 8 inch PVC, and 1400 feet of 6 inch PVC. This project converts sprinkler to drip irrigation on 224 acres near Santa Maria, CA.	Santa Barbara	\$150,000
Linne Calodo Cellars	Installation of solar and weather and soil moisture monitoring hardware on a 47 Acre vineyard in Paso Robles, CA. An irrigation scheduling management plan will be implemented based on soil moisture and site-specific evapotranspiration data.	San Luis Obispo	\$150,000
MJB	Install a flow meter and two pressure sensors at the pump. The information gathered from the devices will be connected to a telemetry network allowing for accurate record and access. Replace a 10 HP Submersible pump to a 25 HP submersible.	Butte	\$23,470
Neal Spring Vineyards	Install Hortau Irrigation Management system to help manage irrigation to reduce water and propane use.	San Luis Obispo	\$35,121
Nicolaus Nut Company	The installation of soil moisture stations, inline pressure sensors, and flow meters throughout the orchard and pump stations; connecting these monitoring devices through telemetry. Install weather stations in the orchard to help achieve an even better level of irrigation efficiency.	Butte	\$46,818
Noble Orchard Company	Existing 30 gpm well will be retrofitted with solar powered pump, solar array and water storage tanks sufficient to support the wells daily output. Storage tanks will be located to maximize water pressure for distribution to most areas of the orchards. Installation of new soil moisture monitoring devices to ensure sufficient moisture to trees. Rainwater harvesting off existing buildings will supply adjacent storage tanks connected to the lower level storage tanks.	Butte	\$30,824
Nock Orchards Inc	Installation of soil moisture stations, pressure sensors, flow meters, and variable frequency drives.	Butte	\$78,647
Oak Creek Ranch	SDI system on Alfalfa to replace existing hand move sprinkler system. Will also include the implementation of fertigation, soil moisture monitoring, and valve automation.	San Luis Obispo	\$150,000
OSR Enterprises Inc	Upgrading low efficiency pump, replacing a second pump with a variable pump that will allow for the elimination of a booster pump. HPB and VFD on Well 2 to eliminate 75 HP booster. Project includes Ranch Systems base station with weather station capable of monitoring site evapotranspiration rates, radio node, two soil moisture probes, pressure transducer all reporting to online application by the cellular network.	Santa Barbara	\$144,041
Paiva Farms Limited Partnership	Retrofit the irrigation practices of 242 acres of almonds and 57 acres of prunes by converting the irrigation systems from a flood and sprinkler system, to a drip irrigation system. Add soil moisture stations. Add a pump monitoring station which will include 2 pressure sensors and a flow meter to monitor how the wells are performing.	Butte	\$148,868
Parrlon Farming	Install moisture monitoring technology, pump and valve control, along with sulfuric acid machines, solution machines, and silos.	Merced	\$144,373
Pasatiempo Vineyards, LLC	Upgrade a vineyard from flood irrigation to drip and to install a soil moisture monitoring station for the vineyard. Add flow meters to three pumps in order to keep better track of water usage. Install a VFD on one pump that irrigates multiple blocks of different acreage. Add soil solution machines to three pumps.	Fresno	\$96,473
Paso Robles Vineyard Inc.	Utilize the Hortau irrigation management system; the Hortau system allows the grower to monitor the plant stress and only irrigate when the plant needs it.	San Luis Obispo	\$150,000
Patricia Diane Vineyard, LLC	Installation of weather and soil moisture monitoring hardware on a 125 acre vineyard in Paso Robles, CA. An irrigation scheduling management plan will be implemented based on soil moisture and site evapotranspiration data generated as a result of this project.	San Luis Obispo	\$6,350

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R&D Farms LLC	Install micro sprinklers to replace existing flood irrigation. Install a moisture monitoring system including 10 monitors and a variable frequency drive on pump.	Fresno	\$150,000
RBZ Vnyds LLC	Installation of weather and soil moisture monitoring hardware on a vineyard in Paso Robles, CA. An irrigation scheduling management plan will be implemented based on soil moisture and site-specific evapotranspiration data.	San Luis Obispo	\$150,000
Reamer Farms	Install the following Ranch Systems equipment: a weather station; soil moisture sensors; and an irrigation control system to enable remote control of the pump.	Yolo	\$65,950
Rio Blanco Dairy	Install double drip line irrigation system to replace current flood irrigation system.	Tulare	\$47,503
Rio Farms LLC	Fuel switch of diesel pump to an electric turbine with VFD control. Drip tape conversion on 30 acres and installation of soil moisture monitoring hardware on 196.3 ac. Replacement of 2,525' of leaky steel/concrete pipeline with 14" PVC.	Monterey	\$150,000
Rio Viento Vineyards	Install the following equipment: a weather station; soil moisture sensors; and an irrigation control system to enable remote control of the pump.	Sacramento	\$53,400
Robert J. Silva Farms	Removal of a 310 HP diesel powered turbine, replaced by a 250HP electric powered turbine with VFD control. This project includes the installation of soil moisture monitoring and sprinkler to drip conversion on 60 of the 109 acres near Chualar, CA. New electric service will be installed to serve the pump station.	Monterey	\$149,934
Rudd Orchards	Installation of soil moisture monitoring, equipping the pump station with a flow meter, and pressure sensors all connected through a telemetry network.	Butte	\$7,308
Scheid Vineyards, Inc.	Irrigation and fertilizer automation equipment, soil and microclimate monitoring equipment, and a VFD for pumping efficiency improvements.	Monterey	\$144,026
Sipple Orchards	Installation of soil moisture stations, inline pressure sensors, and flow meters throughout the orchard and pump stations. By connecting these monitoring devices through telemetry it will ensure proper use and oversight of water.	Butte	\$10,658
Stephens Ranch	Installation of soil moisture stations, inline pressure sensors, and flow meters throughout the orchard and pump stations. By connecting these monitoring devices through telemetry, it will ensure proper use and oversight of their water.	Butte	\$150,000
Steve Fukagawa	Conversion of surface irrigation to drip irrigation and updating pump to accommodate the drip irrigation. Construction of solar panel array to generate power for the project.	Kings	\$150,000
Tablas Creek Vineyard, A CA Limited Partnership	Installation of a solar power plant to power well pumps and installation of soil moisture monitoring hardware. Irrigation scheduling management plan will be implemented using existing soil moisture data and incorporation of CIMIS data from closest station.	San Luis Obispo	\$150,000
Tayyeba Farms LLC	Install real time remote field monitoring and water quality treatment equipment to help irrigate more efficiently. The sensors installed will be reading soil moisture from 6" to 40". The sensors will also read fertilizer applications, and soil temperature at various depths. Soil moisture sensors will be used to determine the appropriate interval between irrigation, depth of wetting, depth of extraction by roots and adequacy of wetting. These remote field monitoring units will include weather sensors to help irrigate based on ET and prevent unnecessary irrigation events.	Kern	\$80,649
Terranova Ranch, Inc.	A combined conversion of a deep well to a VFD and removal of a diesel (fossil fuel) booster pump to an electric booster pump with a VFD on three sites.	Fresno	\$150,000
The Cloverleaf Farm	Install real-time moisture sensors in four crops. Install solar panels (17.4 KW system) to power two pumps (one 25 HP and one 5 HP), and replace a 3 HP gasoline powered pump, and retrofit automatic irrigation on two pumps. Install a graywater system to irrigate existing blackberry fields and garden area.	Solano	\$79,108
Uvas, Inc.	Install a soil moisture sensor, pump controller, flow meter. Upgrade from flood irrigation to a drip system and install a new pump to meet the demands for the new drip system. Install a soil solution machine to amend water quality (with gypsum) and reduce negative impacts on soil structure by increasing water infiltration efficiency and reducing the build-up of harmful salts.	Fresno	\$115,217
Vic Werlhof	Installation of a soil moisture station and a properly equipped pump station to monitor to use of water from pump to tree absorption. The data will be relayed through a telemetry network which will allow for accurate records and easy access to real time data.	Butte	\$10,658

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Vital Farmland LP	Upgrade the irrigation system to supplant flood irrigation on fields with a buried-manifold drip system that applies water according to crop need (as measured by soil moisture sensors). Project will be completed in three phases. The first phase consists of installing the pipe, pump, and soil monitoring infrastructure needed for drip irrigation. The second phase consists of installing drip tape on fields. The third phase consists of extending the hard pipe and installing drip tape on remaining field	Contra Costa	\$62,126
Warren Leslie Davis	Drip Irrigation for Almonds. Use of Volumetric Soil Moisture Probe and irrigation scheduling.	Fresno	\$50,000
Wm. Bolthouse Farms, Inc.	Replace 6.3 miles of 10' diameter aluminum pipe with new 10' diameter Certa-Lok Yelomine PVC pipe and couplers. Reduce water pumping engine run hours.	Multiple Counties	\$150,000