

California Department of Food and Agriculture  
2019 State Water Efficiency and Enhancement Program  
Projects Selected for an Award of Funds (Updated 7/14/20)

Applicant Organization	Project Description	Funds Requested	Cost Share	County
A Farming Trust	<p>This project proposes the conversion from flood irrigation with gated pipe to drip irrigation. The project includes converting an existing 225 HP diesel power pump to a 125 HP premium efficient electric pump powered by electricity (PG&amp;E). It also includes installing a 125 HP variable frequency drive electrical panel, a new drip system. The system will also include Nelson Twig automation system for valve, booster pump and fertilizer pump control. The system will also include 2 Sentek soil moisture probes with remote access to help with irrigation scheduling and inline pressure sensors to record irrigation events and to check line pressure, irrigation duration and irrigation start and end times. The System will also include 1 Puresense field weather station with remote access to determine field weather conditions and a Seametrics magnetic flowmeter to record the amount of water applied to the field.</p>	\$100,000.00	\$206,268.00	Merced
A Farming Trust	<p>This project proposes to convert from flood irrigation with gated pipe to drip irrigation. The project includes converting an existing 225 horsepower diesel power pump to a 125 horsepower premium efficient electric pump powered by electricity (PG&amp;E). It also includes installing a 125 horsepower variable frequency drive electrical panel, a new drip system. The system will also include Nelson Twig automation system for valve, booster pump and fertilizer pump control. The system will also include 2 Sentek soil moisture probes with remote access to help with irrigation scheduling and inline pressure sensors to record irrigation events and to check line pressure, irrigation duration and irrigation start and end times. The system will also include 1 Puresense field weather station with remote access to determine field weather conditions and a Seametrics magnetic flowmeter to record the amount of water applied to the field.</p>	\$100,000.00	\$172,260.00	Merced
A&D Farms LLC	<p>This project intends to convert flood irrigated farmland to micro-sprinklers. The current pump would be replaced with a new more energy efficient 20 HP submersible pump controlled by a variable frequency drive. Irrigation water management will be implemented through the use of telemetry-based moisture sensors combined with a weather station. Flow meters will be installed and used in conjunction with the Rain-bird system to measure water use and be documented through Rain Bird irrigation water management software.</p>	\$61,850.36	\$4,100.00	Fresno
A.P. Esteve Farms L.P.	<p>This project consists of replacing the current pump with a new pump and motor with a higher efficiency, adding a VFD drive with pressure transducer, the installation of a wireless soil moisture monitoring and data logging system, and the addition of wireless soil moisture monitoring utilizing Sentek EnviroScan probes.</p>	\$44,489.59	\$10,725.00	Tehama
Abel Valdez	<p>The project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump to several valves corresponding to irrigation sets. Riser sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the riser. Jain blue jets will be installed on the tape at 36" intervals. This system will use the existing 3 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.</p>	\$57,591.76	\$122.50	Fresno
ACM Permanent Crops, LLC	<p>This project allows for the installation of a VFD, automated valves, and soil moisture monitoring. A VFD will be installed, as well as soil moisture monitoring units. The new valves at the filter station will be automated and on-farm weather monitoring will be installed to help schedule future irrigations.</p>	\$93,912.37	\$17,410.00	Tulare

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Affentranger Ranches	This project proposed to install a drip irrigation system, deep well electric pump, variable frequency drive pump to pressurize water into the filter station (200 HP), flow meter, and a soil moisture sensor.	\$100,000.00	\$48,229.52	Kern
Ah So Mock Nursery	This project proposes to replace old, leaky irrigation pipe to reduce energy and water use. The project will replace sprinkler heads to improve distribution uniformity and install a flow meter and soil moisture monitors.	\$23,399.28	\$2,750.00	Santa Clara
Antonio Cabrera	The project proposes to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system will use the existing 15 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling.	\$90,007.81	\$32,690.45	Fresno
B&S Family Farms	This project proposes to install a 10.4 kW solar system, upgrade irrigation management level from 0 to 3; including soil moisture monitoring equipment, a flow meter, and advanced water management.	\$50,053.38	\$2,515.10	Fresno
Bai Thao	The project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 10 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$100,000.00	\$21,307.75	Fresno
Basila Farms LLC	This project proposes installing an advanced telemetry system that includes a weather station, moisture sensors, automated irrigation, an automated fertigation system, and fully automated integration with CIMIS and other irrigation water application algorithms. The proposed system will be capable of substantially reducing water application on site, through a combination of improved scheduling and fertigation-related reductions in demand for water application.	\$100,000.00	\$43,099.00	Madera
Batth Ranch Inc.	This project proposes to convert to drip irrigation from furrow irrigation.	\$100,000.00	\$171,979.00	San Joaquin
Bob Kuang Nursery	Project will replace low efficiency 15 HP booster pump, replace old and leaky 3 inch main line, replace old and leaky 1 1/4 lateral line (and associated valves) and replace old sprinkler heads. The project will also include installation of a flow meter and include soil moisture monitoring as a means of improving irrigation scheduling.	\$26,475.31	\$2,750.00	Santa Clara

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Bobby Yamamoto Farms	This project proposes to convert a 100 HP diesel engine to electric motor, install pipeline from the pump to tie into existing micro irrigation system, a monitoring system to accommodate enhanced irrigation scheduling, and new PG&E service to bring power to the new electric motor.	\$100,000.00	\$76,528.17	Stanislaus
Brennen Ruggieri	This project proposes converting from flood irrigation to a micro-irrigation system and the installation of a VFD and solar panels.	\$99,999.40	\$45,118.75	Colusa
Brent Storm Farming	This project proposes to convert from flood irrigation to a solid set sprinkler system including the installation of soil moisture sensors, VFD, flow meter and the conversion from a diesel motor to electric motor.	\$99,563.64	\$133,277.67	Butte
Byron Vance	This project proposes to convert from flood irrigation pumped by two 10 HP electric booster pumps with no tail water recovery, to a new high efficiency rotating micro sprinkler on tubing system with integrated soil moisture and weather monitoring. The project also proposes to install a soil moisture monitoring station, evapotranspiration (ET) station, flow meter, a 40 HP electric booster pump with VFD, and a new solar array to offset electricity usage.	\$100,000.00	\$29,892.10	Glenn
C.F. Koehnen & Sons	The proposed project includes converting a solid set irrigated walnut orchard to a double line drip irrigated almond orchard. The project includes the installation of a 60 HP electric pump, double line drip with an accessory solid set irrigation system for frost protection, a variable frequency drive, replacement of current flood bowls with pressure bowls for more efficient pumping, a soil moisture probe with remote access to better schedule irrigation events, a pressure sensor, a weather station, and flow meter.	\$99,997.84	\$43,254.15	Butte
Casey Bellach	The proposed project consists of installing a 20.8 kW solar photovoltaic system, irrigation water management Level 3 equipment including soil moisture monitoring, flow meter, and advanced water management practices.	\$95,191.37	\$2,017.86	Fresno
Chan Chankitnapus	The proposed project intends on setting the operating condition of the pump to match the requirements of a drip irrigation system. This system will use the existing 10 HP submersible electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values. Solar panels will be installed as well to help offset the electricity used throughout the growing season.	\$64,004.30	\$17,684.94	Fresno
Charles Marsh Farming	Project proposes to install a solar array and 8 soil tensiometers. The project will use soil moisture data from the tensiometers plus additional data/information from the CIMIS system, to optimize the timing and volume of water application, while avoiding over-application.	\$100,000.00	\$12,452.00	Colusa

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Cher Chong Vang	<p>This project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 15 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.</p>	\$99,999.99	\$23,607.76	Fresno
Chue Lee	<p>This project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 10 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.</p>	\$61,003.25	\$1,584.00	Fresno
Claudio Duran	<p>This project intends to convert from flood/surface irrigation to a micro sprinkler system and replace 4 gasoline powered pumps to 1 electric short set turbine pump regulated by a variable frequency drive and powered by solar panels. The proposed system includes a variable frequency drive and sand media filter at the pumping station. A 7.7 kW solar system would be installed to power the electric pump and eliminate use of motor gasoline. The micro sprinkler system would replace flood irrigation with fanjet emitters.</p>	\$76,600.00	\$23,475.00	Fresno
Corradi Farms	<p>This project proposes to switch from sprinkler to surface drip irrigation. A VFD will be installed, as well as a flow meter, a sand media filtration system, a telemetric weather station, and two telemetric soil moisture monitoring sites.</p>	\$57,715.41	\$0.00	San Joaquin
Day's Nuts	<p>This project proposes to add a 3.4 kW solar system to existing electric well pump. Additionally, the project will add soil moisture sensors to more accurately schedule irrigation and reduce pumping.</p>	\$48,940.00	\$2,000.00	Merced
Debbie Del Don	<p>The proposed SWEEP project includes the installation of a 35.8 AC rated solar system to offset the current and future electrical usage of an existing 50 HP irrigation booster pump, the installation of a 50 HP variable frequency drive electric panel, the installation of a premium efficient 50 HP motor on an existing turbine booster pump, the installation of two Sentek soil moisture probes with remote access to help schedule irrigations, 2 inline pressure sensors, 1 Davis field weather station with remote access to determine field weather conditions, a Seametrics magnetic flowmeter to record the amount of water applied to the field, and an automation system to turn on and off the irrigation booster pump and change irrigation sets based on the weekly irrigation schedule entered into the controller.</p>	\$100,000.00	\$58,231.00	Merced

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Del Mar Farms	The project is a conversion from hand move sprinkler irrigation to drip irrigation. The project includes converting a existing 225 HP diesel power pump to a 100 HP premium efficient electric pump powered by electricity (PG&E). The project also includes installing a 100 HP variable frequency drive electrical panel and a new drip system. The system will also include Nelson Twig automation system for valve, booster pump and fertilizer pump control, 2 Sentek soil moisture probes with remote access, and 1 Puresense field weather station, and a Seametrics magnetic flowmeter.	\$100,000.00	\$165,775.00	Merced
Dennis Hutson Ranch	The project proposes to replace a leaky cement pipe with a new PVC pipe as well as install soil moisture monitors and a flow meter on a planned retrofitted 50 HP pump.	\$39,854.29	\$2,700.00	Tulare
Der Yang Moua	This project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 2.5 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$56,634.00	\$858.00	Fresno
Dilouie Farm	This project proposes to install soil moisture stations, more efficient sprinklers, and a solar array to the pump to offset the power use. The project also proposes replacing existing, inefficient pump bowls with efficient ones.	\$93,478.21	\$0.00	Tehama
Domingo Mora	The project proposes to set the operating condition of the pump to match the requirements of a drip irrigation system. This system will use the existing 40 HP submersible electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values. Solar panels will be installed as well to help offset the electricity used throughout the growing season.	\$99,703.26	\$38,663.82	Fresno
Donald Rocha II	The proposed project includes several upgrades to the existing drip irrigation system including a flow meter, pumping station, soil moisture monitors, and a weather station. The proposed components will be tied to a telemetry system and irrigation system that incorporates CIMIS data into scheduling software.	\$33,969.60	\$10,000.00	Fresno
Double Eagle Dover, LLC	This project proposes to replace the existing diesel driven pump with a high efficiency variable speed electric turbine pump. The project proposes adding a filtration system, installing a sulfur burner to increase the electrical conductivity in the soil and lower the pH of the Colorado River water which is the source of irrigation water.	\$82,129.85	\$12,149.00	Riverside
Empresas Del Bosque, Inc	This project proposes to replace the current diesel engine on the current booster pump with a more fuel efficient diesel engine. The project also proposes to retrofit the 2 oldest electric booster pumps, add a soil moisture monitoring equipment, and a weather station.	\$100,000.00	\$14,821.65	Fresno

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Eric Quek Q Ranch	The project proposes to install a new pump, a sand media filter, and a booster pump to take advantage of surface water and reduce groundwater pumping and subsidence, and a variable frequency drive (VFD), microirrigation, and flow meters on both the well pump and booster pump. The project proposal will also add a weather and soil moisture sensor.	\$80,182.25	\$6,075.04	Tulare
Florencio Cruz	This project proposes to install a low pressure drip irrigation system, new pump, and irrigation water management level 3. In addition to the flow meter, soil moisture monitoring equipment will be installed. Advanced water management using data from the flow meter, soil moisture monitoring, and CIMIS-based crop evapotranspiration projections will be used for volumetric irrigation scheduling.	\$55,250.23	\$2,500.00	Fresno
Gianina Thaoxaochay	This project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 15 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$57,964.66	\$2,700.00	Fresno
Gill Vineyards	The project proposes installing a highly uniform drip irrigation system. A 116 HP diesel well pump will be replaced by a 50 HP electric pump. Irrigation water management level 3 equipment will be put into place including a new flow meter, a soil moisture monitoring station, and six sensors. Advanced water management using data from the flow meters, soil moisture, and CIMIS evapotranspiration estimates will be used for volumetric irrigation scheduling.	\$93,877.17	\$20,000.00	Fresno
Grzanich Brothers Orchards	This project proposes to replace the hand move irrigation system with a dual double line drip irrigation system with a solid set system only for frost. The project proposes replacing the 20 HP pump with a 60 HP with a VFD. Both pumps will be powered by a proposed solar array. The project also proposes to install soil moisture, weather, and pump monitoring equipment, as well as a rainwater capture system.	\$100,000.00	\$122,515.01	Butte
GSA Farms, Inc.	This project proposes to install a 40 kW direct current solar array, including 134 modules of 300-watt panels, along with 134 Chillon Power CP 250/285 micro-inverters, roof-mounted onto an existing agricultural building. The project also proposes to install a VFD onto the existing 60-HP pump and a Model 615 Pressure Chamber used to directly measure the water demand of trees.	\$100,000.00	\$58,990.00	Glenn
Gulzar Sran	This project proposes the installation of automated plant, soil, and weather monitoring sensors as well as automated pump and flow monitoring. The project also intends to install a VFD and use FarmX NDWI and NDVI imagery technology to determine areas of the field that are being overwatered.	\$86,258.00	\$36,682.00	Fresno

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Guo Ping Yuan Nursery	This project proposes the replacement of 2-inch irrigation mainline with 3-inch PVC line and replace leaky laterals and associated valves with 1.5-inch PVC. The well pump will be replaced with a more efficient 5 HP pump. Sprinkler heads will also be replaced to improve distribution uniformity and a flow meter will be added.	\$53,930.64	\$2,750.00	Santa Clara
Han Qiang Kuang	This project proposes to replace a 3-in main line and 1.25-in lateral lines with new lines to reduce friction loss and save energy and water. The project proposes to replace old sprinkler heads with new heads to improve distribution uniformity and add a flow meter and add moisture sensors to aid in irrigation scheduling and reduce water and energy use.	\$28,476.76	\$3,550.00	Santa Clara
Hansen Family Revocable Living Trust of 2005	This project allows for the installation of a new drip system, a soil moisture probe, on-farm weather station, flow meters, pump and valve control, and the conversion of an existing 40 HP diesel pump to an 20 HP electric pump.	\$69,741.80	\$0.00	Fresno
HB Ag Investments	This project proposes the installation of a 42.75 kW direct current solar system to power an existing 75 HP electric pump. Soil moisture monitoring units and a weather station will be installed to utilize evapotranspiration-based scheduling along with an acid injection and gypsum injection system.	\$100,000.00	\$57,054.44	Kern
Hershel Hill Inc.	This project proposes to purchase and install a replacement pump and motor system, along with a new adequately sized drip filtration and metering system. The project will also deploy a total of six new tensiometers, to be placed in pairs (one 12-inch and one 24-inch tensiometer) and dispersed across the project area so as to maximize coverage and provide fine scale soil moisture data. The project will achieve water savings by using a new and more effective drip system. The project will leverage soil moisture data from the tensiometers plus additional data from the CIMIS system.	\$43,304.29	\$2,400.00	Fresno
IV Farming Trust	This project proposes the conversion from flood irrigation to drip irrigation. The project proposes converting an existing 225 HP diesel power pump to a 100 HP electric pump powered by electricity (PG&E). It also includes installing a 100 HP variable frequency drive electrical panel, Nelson Twig automation system for valve, booster pump, and fertilizer pump control. The system will also include 2 Sentek soil moisture probes and 1 Puresense field weather station with remote access and a Seametrics magnetic flowmeter to record the amount of water applied to the field.	\$100,000.00	\$184,624.00	Merced
James Hansen	This project proposes the installation of a new drip system, a soil moisture probe, flow meters, pump and valve control, and the conversion of an existing 40 HP diesel pump to an 20 HP electric pump.	\$100,000.00	\$1,019.64	Fresno
Jason Yamamoto	This project proposes to add new electricity service to provide power to new electric motor, install a VFD, pipeline to move water from the pump to existing micro irrigation system, and monitoring equipment, as well as the conversion of a 100 HP diesel engine to electric motor.	\$100,000.00	\$53,494.25	Stanislaus
Jay Ohri	This project proposes to convert from flood irrigation with a diesel pump to micro-irrigation using an electric pump, install soil moisture sensors and a VFD.	\$98,977.47	\$177,993.55	Sutter

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Jesse Khosa	The proposed project plans to use the existing 100 HP turbine electric pump. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values. Solar panels will be installed to help offset the electricity used throughout the growing season.	\$100,000.00	\$95,222.01	Fresno
Joe & Anna Da Silva Trust	This project proposes to install an innovative water recycling system that will reuse process water from an existing milk cooler system. The project will deploy a water recycling system (pump, pipelines, and appurtenances) to transfer cooling water effluent for beneficial use. During normal operations, cooling effluent will be transferred to the dairy's existing ponds, held temporarily, then distributed to the adjacent fields for irrigation, offsetting other on site water use and groundwater pumping. When not needed for irrigation (winter), the water will be used to water cows at the dairy. To further reduce water consumption, the project will deploy a total of 8 tensiometers (4 12-inch and 4 24-inch) across the Applicant's existing agricultural operations. The tensiometers, combined with improved scheduling based on CIMIS data, will greatly improve irrigation water use efficiency on the site, which is currently irrigated with a combination of groundwater and surface water. Tensiometers will be dispersed across the site so as to maximize coverage and provide fine scale soil moisture data. To further improve energy efficiency of the facility, the project will also deploy a high-efficiency lighting system at the dairy, thereby further reducing the amount of electricity that is consumed on site as a preliminary to upstream of the proposed water recycling and reuse for irrigation.	\$62,360.11	\$10,000.00	San Joaquin
John and Carmen Berns	The project proposes to install an irrigation management system and a 33 kW solar power system. The irrigation management system will consists of soil moisture sensors, cloud-based data collection, a flow meter and a weather station.	\$100,000.00	\$11,113.89	San Diego
John Wu Nursery	The project proposes to replace existing galvanized main line pipe with PVC pipe and add soil moisture sensors to improve system uniformity, reduce friction loss, and reduce energy use.	\$38,046.91	\$3,800.00	Santa Clara
K&G Ranches	This project proposes to use irrigation water management level 3 including the installation of a weather station, soil moisture sensors, plant stress sensors and pressure sensors, and VFD.	\$66,159.00	\$38,370.23	Tulare
KAHAL SATGUR S	This project proposes installing a VFD on a 100 HP well pump , a flow meter on each pump, and the conversion from time-based irrigation scheduling to irrigation water management-3 irrigation scheduling, using the FarmX system.	\$75,061.81	\$45,298.00	Madera
Kao Sue Lee	The project includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 10 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$70,407.23	\$2,226.00	Fresno



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Karen Yamamoto	The proposed project aims to convert the diesel engine to a vertical turbine pump powered by an electric motor and convert from flood and high-pressure sprinklers to micro-sprinklers and double line drip. The project also proposes to add a weather station, soil moisture probes, pump station monitoring, and field valve automation to increase water scheduling efficiency.	\$100,000.00	\$144,521.52	Stanislaus
Kautz, Kurt A & Sandra TR	This project proposes substituting a 50 HP groundwater pump for a 50 HP VFD surface water pump, replacing sections of drip hose damaged by wildlife, and installing a pump station and 50 HP pump with VFD and flow meter. The project also proposes to install a 1,150 foot pipeline under the field's road to connect diverted water from the slough to the existing filters and irrigation system. A Remote Telemetry Unit will be installed on the new pump to measure water remotely and a capacitive probe will be placed in a representative spot in the field and monitored remotely.	\$84,631.12	\$14,450.00	San Joaquin
Keith Yamamoto	The proposed project aims to convert the diesel engine to a vertical turbine pump powered by a 100 HP electric motor. The project also aims to install a weather station, soil moisture probes, pump station monitoring, and field valve automation to increase water scheduling efficiency.	\$100,000.00	\$25,375.35	Stanislaus
Keo Vanh	The project proposes to set the operating condition of the pump to match the requirements of a drip irrigation system. This system will use the existing 10 HP submersible electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values. Solar panels will be installed as well to help offset the electricity used throughout the growing season.	\$86,685.50	\$32,427.72	Fresno
Kevin Herman	The goal of this project is to replace an inefficient 225 HP diesel pump with a new efficient electric 75 HP pump and a 75 HP VFD. Another inefficient 225 HP diesel pump will also be replaced by a new efficient electric 60 HP pump and a 60 HP VFD and a flow meter. A subsequent pump will also have a flow meter installed.	\$100,000.00	\$15,597.52	Madera
KidCo	The project proposes five irrigation system upgrades including the installation of four variable frequency drives, fourteen remotely-accessed soil moisture probes, fourteen remotely-accessed pressure transducers at the pumps and in the field, flow-meter monitors at the pumps, and remote valve control and irrigation controllers. Existing flow meters, electrical valves, crop water-use modeling, and weather stations will be integrated.	\$97,952.07	\$67,128.66	San Joaquin
La Mesa Vineyards LLC	The project proposes installing a 10 kW direct current solar photovoltaic and battery system to power agricultural needs, including a main well with submersible pump. The current 10 HP pump will be upgraded and a flow meter will be installed. An additional 5,000 gallon water tank will be installed to improve water distribution for irrigation. Drip lines will be upgraded with low flow emitters and valves to allow individual rows to be watered when needed. A weather sensor will also be installed to monitor rainfall, temperature, and wind speed for improved decisions on irrigation.	\$100,000.00	\$7,471.00	Amador

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Lakshmi Farms	This project proposes installing an irrigation water management-3 water savings solution, 150 HP well pump motor, well casing/bowl replacement, and VFD on the well pump. The project will convert from time based irrigation scheduling to irrigation water management-3 irrigation scheduling using the FarmX system. The project will also install a flow meter to monitor water usage. The project plans on using FarmX NDWI and NDVI images to determine areas of the field are over watered.	\$79,751.00	\$260,549.38	Tulare
Lee Del Don	This project proposes to install a 71.6 AC rated solar system, a 75 HP variable frequency drive electric panel, a premium efficient electric motor on an existing turbine booster pump, two Sentek soil moisture probes, 2 inline pressure sensors, 1 Davis field weather station with remote access, a Seametrics magnetic flowmeter, and an automation system.	\$100,000.00	\$149,208.00	Merced
Le-Fort's Organic Crops, Inc.	This project proposes to implement improved irrigation scheduling of micro-irrigation system with addition of leaf wetness, soil moisture and temperature sensors, a rain catchment system designed to capture over 12,000 gallons of water per year, and the installation of a 7 kW solar photovoltaic system.	\$28,393.00	\$1,297.40	San Luis Obispo
Lewis Yang	The project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 10 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$98,665.71	\$4,539.00	Fresno
Lilian Yang	The project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. Crops will remain the same (diversified specialty vegetables). The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 15 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$62,689.31	\$2,709.00	Fresno
Lindsey Farms	The project proposes to install a highly uniform low pressure drip system, a booster pump for surface water application, irrigation water management level 3 management and a 10 HP booster pump. Irrigation water management upgrades include the installation of a flow meter and soil moisture monitoring equipment.	\$48,907.31	\$3,945.00	Fresno
Lindstrom Vineyard	This project proposes to install a 27.75 kW solar array supplying electricity to a 50 HP submersible pump, installation of 4 soil moisture meters, and a weather station connected to a monitoring system to best determine irrigation cycles. Improvements also include upgrading the existing flow meter to a digital flow meter connected to the monitoring system, and electric solenoid valves installed in the irrigation system connected to a irrigation controller to pinpoint best time-of-day to irrigate without the chance of leaving the system on too long.	\$100,000.00	\$40,665.67	San Luis Obispo

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Lohse Ranch	This proposed project will replace existing flood irrigation system with low pressure double line drip system. A VFD pump will also be installed. Furthermore, the ranch will be installing a Rain Bird weather and soil moisture monitoring system to track real time soil moisture, applied water, and evapotranspiration. A 30 kW solar ground mount system will be installed. Furthermore, the ranch will implement the planting of cover crops, mulching, and compost applications during project term.	\$100,000.00	\$124,462.76	Glenn
Lor Chang	This project proposes to replace the drip system with new below-ground PVC, new layflat submains, and more valves for more efficient irrigation sets. Additionally, the project proposes to add soil moisture sensors, a flow meter, a sand media filter, and pump retrofit.	\$69,325.18	\$2,850.00	Merced
Magnolia Pacific Farms, LLC	This project proposes the upgrade of a filter station and upgrade of a 50 HP electric pump to a 40 hp electric pump. Soil moisture monitoring units will be installed and the new valves at the filter station will be automated.	\$100,000.00	\$11,144.27	Kern
Mai Ka Xiong	The project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 5 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$83,794.53	\$2,997.00	Fresno
Marvin Taylor	This project proposes installing a dual line drip irrigation system, an irrigation mainline, a flow meter, a 56.9 kW solar energy system, and an automated system with dendrometers, soil moisture, and water pressure sensors.	\$100,000.00	\$156,284.37	Glenn
Mary Segura	The project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump to several valves corresponding to irrigation sets. Riser sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the riser. Jain jets will be installed on the tape at 36" intervals. This system will use the existing 7.5 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$100,000.00	\$18,245.46	Tulare

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May Xiong Vang	This project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 2.5 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$56,634.00	\$858.00	Fresno
McKellar Ranch Co., Inc.	The project proposes to add a VFD to the primary well, flow meters on all wells and booster stations, and add soil and weather monitoring stations.	\$71,912.46	\$0.00	Tulare
Michael H Nielsen	This project allows for the installation of two 9 kW solar systems to power the existing electric pumps. A weather station will be installed to utilize evapotranspiration based scheduling. Pump control technology will also be used for remote scheduling of the pump. Flow meters will also be installed and a Diamond K mixer will be used to apply soluble calcium to the soil and improve water infiltration into the root zone.	\$95,759.40	\$0.00	Fresno
MK Neubert Farms	This project will convert two electric pumps, 20 HP and 15 HP, to solar electric. The project will also implement soil moisture monitoring meters and a weather telemetry system to improve irrigation scheduling.	\$57,700.25	\$12,077.55	Yuba
Neilson Ranch	This project will replace old, leaky, two-line drip tubing to a one-line, below ground, drip tubing to be placed only around the root zone of each tree. An existing old, leaky pipeline irrigation system, that uses a 5 HP submersible pump, will be replaced with a new, more efficient, professionally designed irrigation system that will meet NRCS standards. A new irrigation control system and soil moisture sensors and weather sensors will be installed. The new irrigation system will also include a new flow meter, variable frequency drive, and new 10 HP pump.	\$25,799.20	\$17,000.00	Tulare
Neufeld Farms, Inc.	This proposed project includes installing a dual line drip irrigation system on a stone fruit orchard that is currently flood irrigated. The existing inefficient 60 HP pump will be replaced with a highly efficient 60 HP pump with a VFD. A flow meter and in-field soil moisture monitors will be installed that will produce real time data to properly time and ensure the efficiency and effectiveness of irrigations.	\$100,000.00	\$55,015.27	Tulare
Nicholas Boldt Farms	The project plans to convert a diversified stone fruit orchard from an inefficient furrow irrigation to micro-irrigation (Fan-Jet system), add soil moisture monitoring, flow meters, automation, and a solar system. The project will include adding a 10 HP electric lift pump to the existing 15 HP electric well pump to pressurize the irrigation system and allow for surface water to be utilized when available using a VFD to match water requirements. The project will implement cover cropping and mulching during the project term.	\$99,811.50	\$43,496.00	Fresno
NMD Land LLC	This project will convert flood irrigated vineyards to low pressure micro-sprinkler irrigation for almond production.	\$99,649.14	\$88,293.14	Fresno

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Oosterkamp Farms Inc	This project proposes to build a new pump station with a VFD that can irrigate the new almond field in two 60 acre blocks. They propose installing a new filter station for Oosterkamp Farms at this Vernalis block of walnuts. Central irrigation will replace a turnout gate located in the nearby dirt floor canal with a new 15" screw gate and run a new 15" supply line to a new elevator screen box and pump suction box where a new 50 HP short coupled turbine pump will be placed. A new electrical backboard and Variable Frequency Drive for the new pump along with a timer will be installed. A new concrete pad will be poured downstream of the new booster pump where a 5-tank sand media filter station will be used to filter the water. Two Bermad set control valves will be placed downstream the filters to change between set when the orchard is redeveloped. pH Technologies will help monitor the pH of the water and automatically adjust the sulfuric acid to achieve a desirable pH for the trees. Irrigation Matters will run gypsum through the water to the field which will also help treat the water. Hortau Simplified Irrigation soil monitor stations, climate monitor stations will also be installed.	\$99,569.20	\$32,256.70	Stanislaus
Pellegrini Ranches	This project proposes installing a flow meter on the pump, soil moisture and water pressure sensors in every irrigation block, a weather station, and Farm(x) software.	\$26,123.00	\$9,409.46	Sonoma
Phillip Tubbs	This project includes the installation of a 25.2 kW solar photovoltaic system to supply electricity for the 30 HP well pump. The project also proposes to install a Variable Frequency Drive, acid injection system, and a field moisture monitoring system, including electronic flow meter and pressure sensor, four soil moisture sensors, and a weather station.	\$80,676.21	\$17,558.00	San Luis Obispo
Phoenix Orchard Group II	This project will convert 2 existing 300 HP diesel pumps to 140 HP and 250 HP natural gas pumps. The pumps and wells will be rehabilitated to reduce the pumping of sand and increase well efficiency and flowmeters will also be added to each well.	\$100,000.00	\$223,150.00	Fresno
Ping Huang Cheng Nursery	This project proposes to replace old and leaky lateral irrigation lines (and associated valves) and add overhead sprinkler nozzles to improve irrigation application uniformity and reduce water use. The project also proposes to install a flow meter to accurately monitor water and utilize tensiometers as an aid in irrigation scheduling.	\$12,969.73	\$2,700.00	Santa Clara
Quail Valley Ranch	This project proposes to convert a 25 HP submersible open discharge direct drive well into a mainline pipe while adding a VFD to the pumping station. The project also proposes to convert two 1,100 ft wheelines into a 589 ft center pivot and install an iMetos D3 weather station with soil moisture monitors.	\$89,946.62	\$17,885.00	Modoc
Renge Farms	This project proposes to replace the current flood system with a drip irrigation system, including sand media filtration system, a VFD, flow meters, soil moisture sensors, weather station and irrigation automation. Both deep well water and surface water will charge the proposed drip system.	\$99,989.27	\$56,528.25	Fresno
Richard and Susan Markarian Trust	This project proposes to install a highly uniform, low pressure drip irrigation system, a new pump, flow meter, and soil moisture monitoring equipment. Advanced water management using data from the flow meter, soil moisture monitoring, and CIMIS-based crop evapotranspiration projections will be used for volumetric irrigation scheduling.	\$100,000.00	\$24,837.31	Fresno
Richard Peeren	This project plans on upgrading the existing micro-irrigation system to a full control automated irrigation system with moisture monitoring, weather monitoring, dual line drip irrigation, with upgraded sand media filter system and 20 HP submersible pump.	\$40,817.84	\$6,815.18	Fresno
Rolling Hills RR, Inc	This project includes the installation of double line drip irrigation, VFD, real-time remote field monitoring sensors, flow meters and a solar system.	\$100,000.00	\$11,636.59	Tehama

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Rosalio Curiel	This project proposes to install soil moisture stations, a solar array , pump replacement with a VFD, evapotranspiration station, and new drip tubing to replace the leaky tubing in the field.	\$89,193.11	\$0.00	Tehama
Rosie Lee	The project proposes to install a drip irrigation system and solar panels as well as convert from flood to drip irrigation. The project also proposes to install a VFD, a flow meter, and soil moisture sensors to reduce water use.	\$58,342.18	\$2,800.00	Merced
Rui Kuang Nursery	This project proposes the replacement of old and leaky irrigation mainlines and laterals, and associated valves, while adding new spray nozzles.	\$22,125.74	\$2,700.00	Santa Clara
Salman Farms Inc.	This project proposes installing a drip irrigation system, including a 25 HP centrifugal pump combined with a variable frequency drive, a flow meter, and two soil moisture probes.	\$99,879.00	\$19,280.00	Sacramento
Sandhu Farms	This project proposes to convert from flood irrigation to micro sprinkler irrigation. The project proposes to install a submersible well with a new pump, solar panels, and irrometer. The project proposes to use evapotranspiration(ET) reports and base irrigation on ET reports and the use of a pressure chamber.	\$100,000.00	\$57,088.00	Tehama
Saul Medina	This project proposes to replace the existing 150 HP diesel pump with a new 100 HP high efficiency NRR Vertical Electric Motor and install a 100 HP VFD. The project also proposes to install a new soil moisture monitoring system and solar system to run the new electric pump.	\$99,621.76	\$5,000.00	Glenn
Senior Canyon Ranch	This project proposes to implement ground moisture sensors and automated controls.	\$68,200.00	\$30,000.00	Ventura
Shane Burkhart Farms	The project proposes to install a 80.1 kW solar photovoltaic system. A weather station capable of calculating evapotranspiration and soil moisture probes will be installed to inform irrigation scheduling. The pump station will be upgraded with Seametrics magnetic flow meters to record water application to the fields, along with variable frequency drives, a 50 HP booster pump, and remote flow, pressure monitoring with alerts. The project also includes the installation of electric timers that will be used to automatically turn off the irrigation booster pumps and fertilizer pumps after an irrigation event has occurred for the selected amount of time.	\$100,000.00	\$152,960.00	Fresno
Shun Heung Kwong Nursery	This project proposes to replace existing well pump old leaky irrigation pipe (main line and laterals and associated valves). Sprinkler heads will be replaced to improve distribution uniformity and a flow meter and tensiometers will be installed.	\$53,648.60	\$4,350.00	Santa Clara
Sik Kwan Kwong Nursery	This project proposes to replace existing 15 HP booster pump with a new 15 HP booster pump to reduce energy use. The project will also replace old leaky irrigation lines and associated valves to decrease friction loss, save energy and water. The project will also replace old sprinkler nozzles with new nozzles to improve distribution uniformity. This project proposes to install a flow meter and soil moisture sensors to aid in irrigation scheduling.	\$15,677.74	\$3,550.00	Santa Clara
Sonia Mora	The project proposes to set the operating condition of the pump to match the requirements of a drip irrigation system. This system will use the existing 15 HP submersible electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values. Solar panels will be installed as well to help offset the electricity used throughout the growing season.	\$58,827.66	\$15,331.75	Fresno

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Souza Brothers Dairy	This project proposes installing a new 75 HP electric pump, along with a larger pipe, to increase water flow and decrease pumping times. Additionally, a new variable frequency drive will be added to increase energy efficiency, as well as adding one more sand media filter tank to the current filtration system to account for additional flow rate. A flow meter and soil moisture sensors are proposed in this project to improve efficiency of irrigation. Finally, a solar array of 30 kW is proposed.	\$100,000.00	\$49,117.61	Merced
Springfield Ranch	This project proposes to add a 31 kW solar array, flow meter, and soil moisture sensor.	\$68,100.00	\$27,900.00	Fresno
Steve Fukagawa	This proposed project includes installing a dual line drip irrigation system. A 15 HP pump will be replaced with a new highly efficient 15 HP pump with a Variable Frequency Drive. A solar system is proposed to reduce electricity used from the utility. A flow meter and in-field moisture monitors will be installed. Flow and moisture components will be remotely monitored and controlled. The monitoring and scheduling software will incorporate local CIMIS data and real time field data to precisely time and execute irrigations.	\$85,413.69	\$34,279.77	Kings
Surinderpal Khosa	Project plans to use the existing 100 HP turbine electric pump. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values. Solar panels will be installed to help offset the electricity used throughout the growing season.	\$100,000.00	\$126,313.01	Fresno
Sycamore Marsh Farm	This project proposes to install two solar arrays plus 16 tensiometers and a new water meter.	\$100,000.00	\$42,264.30	Colusa
T & C Vineyards	The proposed project consists of upgrading a 25 HP well pump to a higher efficiency 30 HP pump, installing a 15 HP ditch pump to begin using surface water through the drip system, and adding a 27 kW solar photovoltaic system. Water savings will be achieved with the addition of soil moisture monitoring and advanced water management practices.	\$100,000.00	\$18,336.09	Fresno
Terra Cultura	This project will install a Direct Solar booster pump and accompanying photovoltaic direct solar grid and piping to bring water to two 5,000 gallon water tanks, where it will be later gravity fed down to a drip irrigation system. Flow meters, soil moisture sensors, and smart irrigation zone controllers will be installed, as well as a 550 gallon capacity rooftop rainwater catchment system. The project will replace a grid-tied electric booster pump with a Sunpump SCB 22-165-120BL Direct Solar (DC) booster pump with a Variable Frequency Drive. This project will replace a hand-moved sprinkler irrigation system with a new drip irrigation system. Soil moisture sensors, flow meters, and smart irrigation controllers will be installed in each zone to maximize water scheduling and application efficiency.	\$9,565.42	\$20,340.00	San Benito
Tom Flux	This project aims to replace a 30 HP turbine pump with a 20 HP turbine pump, including a flow meter with an internal datalogger, and 4 irrometer watermark monitor with 16 soil moisture sensors. The project also plans on replacing wheel style irrigation lines with a new efficient center pivot system.	\$98,774.20	\$18,100.00	Lassen
Tretheway Property	This project proposes to install a grower-owned turnout of the district pipeline with a new flow meter, a two-way Remote Telemetry Unit at the turnout, a soil moisture station, a weather station to assist in real time evaluation of environmental conditions, a sand media filter with an automatic back flush system, and a solar electric system to run a new 5 HP centrifugal booster pump.	\$90,171.13	\$7,850.00	San Joaquin

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Tria Vang	The project proposes to install a drip irrigation system and to set the operating condition of the pump to match the requirements of a drip irrigation system. The proposed system includes a buried PVC manifold from the pump connection to several valves corresponding to irrigation sets. Layflat sub-mains will be connected at the valves. T-tape drip lines will be directly attached to the layflat hose. Drip lines will either be on the soil surface or buried 2-3 inches beneath the soil surface on vegetable beds. This system will use the existing 10 HP electric pump, which will be either retrofitted or replaced to increase efficiency and provide greater pressure for the drip irrigation system. The water source is groundwater from a single well on the property. Soil moisture sensors will be used to determine irrigation scheduling, and the flow meter will be used to estimate the amount of water applied and compare it to known values.	\$100,000.00	\$10,681.94	Fresno
Vizcarras Universities California Almonds	The project proposes to install a 28.52 kW solar system and a soil moisture sensor.	\$94,457.00	\$6,500.00	Madera
Wagon Wheel Farms	The proposed project includes installing a highly efficient microsprinkler irrigation system. The 15 HP pump will be replaced with an efficient pump with a Variable Frequency Drive. A flow meter and in-field soil moisture monitors will be installed that will produce real time flow rate and soil moisture data.	\$100,000.00	\$34,374.64	Fresno
Wendy Chan Nursery	This project proposes to replace old 10 and 15 HP booster pumps with small and more efficient 5 and 7.5 HP booster pumps, add flow meter and soil moisture sensors, and replace four 82-gallon pressure tanks with new pressure tanks.	\$9,213.60	\$1,670.00	Santa Clara
Yip Hing Kwong	This project proposes to replace 2-inch galvanized mainline with a new 3-inch PVC mainline to reduce friction loss and improve distribution uniformity to the laterals. The project will also replace lateral lines with 1.25-inch PVC to improve distribution uniformity. The project will also replace old sprinkler heads with new high flow heads, a flow meter, and soil moisture sensors.	\$25,209.94	\$3,550.00	Santa Clara
Zhou Ping Cai	This project proposes to replace existing mainline pipe with larger diameter (6") pipe and replace existing lateral pipe (and associated valves) with 2" pipe to improve distribution uniformity. Project will also replace sprinkler heads to improve distribution uniformity and reduce both energy and water use. Project will include the installation of a flow meter to monitor water use and will utilize soil moisture monitoring to assist in irrigation scheduling. The well pump supplying irrigation water to the project is 30 HP and is electric.	\$28,207.78	\$2,700.00	Santa Clara