

Sonoma & Mendocino Counties

Agricultural Drought Funding Needs

Infrastructure & Equipment Needs			
Need	Estimated Cost	Description	Industries Supported
Wind Machines	\$35,000 each \$3,500,000 total	Approximately 100 needed between Sonoma & Mendocino counties to support sustainable frost protection.	Vineyards
Soil Moisture Probes / Weather Station	\$5,000 each \$2,500,000 total	Approximately 500 needed between Sonoma & Mendocino counties. Improves irrigation scheduling and optimization for crops.	Vineyards, row crops, dairies, and orchards
Additional Reservoir Construction	\$650,000 - \$750,000 per project	Under 50-acre feet and 25 ft high. Need funding & policy changes to allow for additional reservoirs to be constructed to increase storage capacity year-round.	Vineyards, row crops, and dairies
Reservoir & Pond Liners	\$1 per sq ft	Installation of liners in area ponds and reservoirs will help limit the amount of water loss due to absorption and allow for a longer storage time and capacity.	Vineyards and dairies
Water Release Infrastructure / Cooling systems for stream augmentation	\$50,000 each site	Supports summertime fish habitat and other environmental benefits.	All agriculture
Stationery Engine Replacement for Pumping Groundwater	\$350,000- Electric (per engine) \$90,000- Propane (per engine)	Clean energy and variable speed for water conservation control as needed. Regulatory and permitting relief.	All agriculture

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Implementing and Refining On-Farm Recharge	\$3,500,000 total	On-Farm Recharge (OFR) provides a means to recharge available flood, and stormwater flows onto farmlands for direct recharge. The requested budget for this project will include all costs for implementing, monitoring, data collection, data analysis and reporting for the five sites, and development of the regional OFR initiative, including maps, recommended management practices, and OFR tools.	All agriculture
Well Construction	\$75,000 - \$100,000 per well		All agriculture
Groundwater monitoring devices	\$1,500 each	Approximately 150 needed Sonoma & Mendocino counties to monitor groundwater availability and levels accurately.	All agriculture
Groundwater Location Services	\$2,500 starting per project	Location of groundwater through electrical resistivity tomography (ERT) to allow for efficient well drilling. Gary Mann P.G. Earth Imaging Geologic (209) 296 6560 earthimaging@hotmail.com	All agriculture
Storage Tanks	\$3,000 per 5,000 gallons	Allows for efficient storage of off-site and on-site water. Can be implemented without sustainable practices such as rainwater catchment.	All agriculture

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Water-efficient irrigation systems		Replace overhead sprinklers with micro-sprinklers and drip. To include timers and controllers that may vary from hand turn to wired and telemetry with connections to solenoids in the field and leak detection/shut-off features.	Vineyards, row crops, dairies, and orchards
Public funding for Public/Private partnership with Syar Industries to dredge Russian River	Petaluma cost- \$9.7 million	Allows for the river to maintain a larger annual capacity without risk of flooding.	All agriculture
Water Market Exchange Program	\$300,000 for program development and launch		All agriculture
Technical assistance and workshops for grant applications		Potential partner with NRCS and RCDs	All agriculture
Shade Balls		Shade balls are balls made of various materials and sizes floated on water storage ponds that assist with reducing evaporative loss up to 90% and water quality impacts. Most agricultural ponds are between 1-5 acres.	All agriculture
WaterSavr	Approximately \$27.50/surface acre/month; Dispensing Unit \$5,000	WaterSavr is a patented hydrated lime powder with hydroxy alkanes (food grade and potable approved) applied to the surface of the water. Ionic repulsion causes the hydroxy alkanes to self-spread, resulting in a monomolecular film on the water's surface. On average has a 30% evaporative reduction.	All agriculture

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Groundwater Well Meters	\$3,000 per unit \$1,500,000 total	Approximately 500 needed between Sonoma & Mendocino counties. Voluntary meter program for use on wells to track water use. Data would be kept confidential and used as a direct tool for well owners to monitor their water use.	All agriculture

Regional Programs Needs			
Need	Estimated Cost	Description	Industries Supported
Region Wide Irrigation Efficiency Testing Program	\$2,000,000 for program development and management	Potential partners with NRCS, RCDs, and Farm Bureau to develop a voluntary program for farmers and ranchers in the area to participate in to have irrigation monitored and tested on an ongoing basis.	Vineyards, row crops
Drought resistant seeds for cover crop	\$100 an acre \$1,200,000 total	Cover crops have significant impacts on many important soil processes and functions including Improving soil health and moisture retention. Estimated at 20% of all currently planted vineyards to participate (12,000 acres).	Vineyards
Reservoir Cleaning Program	\$20 per cubic yard of material	Allows for larger capacity and higher water quality. Regulatory relief is needed for moving and disposal of cleaned-out materials.	Vineyards and dairies

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Updating and expanding the California Irrigation Management Information System (CIMIS)		CIMIS weather stations collect weather data on a minute-by-minute basis. Hourly data reflects the previous hour's 60 minutes of readings. CIMIS expansion should provide weather info to reduce the number of site-specific weather stations needed for accurate water budget calculations. Efficient use of water resources benefits by saving water, energy, and money.	All agriculture

Drought Practices			
Need	Estimated Cost	Description	Industries Supported
Dry year mowing/ cultivating for weed reduction			Vineyards
Thinning to reduce canopy (reduces crop yield as well)			Vineyards
Delay shoot thinning			Vineyards
Delay in Irrigation			Vineyards
Drought Resistant Rootstock Planting Program		Estimated 20% replacement of current planted acreage	Vineyards
Use of Animals in Vineyards to Enhance Soil Health, Manage Cover Crop Competition, and Reduce Water Use			Vineyards