

Agricultural Water Enhancement Program (AWEP)
Central Coast Irrigation and Nutrient Management Project
Report of Accomplishments – February 2010

Project Overview

This program aims to conserve surface water and groundwater and enhance water quality in priority watersheds on California's Central Coast by employing experienced irrigation and nutrient management technical staff to: conduct field evaluations, develop recommendations for improving efficiency, and offer technical assistance and follow-up for implementation with cooperating growers. Through comprehensive outreach and high caliber site-specific field services, this project assists willing growers in improving the efficiency of their operation leading to water savings and water quality improvement.

The project area is the north coast watersheds of Santa Cruz County, the Pajaro River Watershed of Santa Cruz, Monterey, Santa Clara, and San Benito counties, the Elkhorn Slough and Salinas River Watersheds of Monterey, the Upper Salinas River Watershed of San Luis Obispo County, the coastal watersheds of San Luis Obispo County, and the Santa Maria River Watershed of Santa Barbara County.

Project Goals

- Provide water quality benefits through reduced runoff and leaching of nutrients.
- Provide water conservation benefits through reduced water usage.
- Provide yield and cost benefits through efficient input management.
- Conduct technology transfer to support agricultural irrigation and nutrient efficiency.
- Assist producers in meeting water quality regulatory requirements of the California Porter-Cologne Act of 1969 and the Federal Clean Water Act, as currently being enforced by the SWRCB and RWQCB through the Irrigated Lands Discharge Waiver Requirements.

Project Accomplishments and Goals Achieved

- a) 29 growers participated and installed 185 conservation practices.
- b) 2,215 acres of project area received treatment through the installation of the following conservation practices:
 - 1) 32,922 feet of Irrigation Water Conveyance
 - 2) 36 Flow Meters
 - 3) 925 acres converted to Micro-Irrigation
 - 4) 407 acres with improved Sprinkler Irrigation Systems

- 5) 546 acres with Irrigation System Evaluations
 - 6) 49 of Nutrient Management
 - 7) 23 acres of Irrigation Land Leveling
 - 8) 121 acres of Pest Management
 - 9) 134 acres with Cover Crop
 - 10) 5 Improved Pumping Plants
 - 11) 1706 feet of Underground Outlets
 - 12) 9 acres with PAM treatment
 - 13) 1 Sediment Basin
 - 14) 2 Waste Treatment Facilities
 - 15) 2 acres of Critical Area Planting
- c) Other partner contributions that further project objectives include: engineering assistance valued at \$36,000 provided by the Coastal San Luis RCD that resulted in 144 conservation practices installed; irrigation and nutrient management assistance valued at \$130,000 provided by two UC Cooperative Extension specialists resulting in enhanced practice payment levels, 8 new SOP's for irrigation system evaluation protocols, 5 field trials, and PAM research; regional program coordination valued at \$12,000 provided by the Monterey Bay Sanctuary Foundation to develop communication tools and facilitate partner communication; staff from the Central Coast Ag Water Quality Coalition provided program support, outreach, and education valued at \$13,500; a \$110,000 grant from the Santa Clara Valley Water District targeted 10 growers to perform irrigation system evaluations.
- d) The primary regulatory requirement this project addresses involves the Conditional Ag Waiver issued by the Water Board. Nearly all practices selected for this program will help reduce nitrate leaching and improve nutrient management. First year accomplishments have brought growers more in line with Ag Waiver guidelines. Project partners are now working with Water Board staff to craft realistic guidelines for an alternative Conditional Waiver yet to come.
- e) AWEPP partners have provided on-going informational activities in the form of program brochures, community outreach, web presence, monthly partner meetings, newsletter announcements, workshop participation, industry outreach, and regulatory agency coordination. All communications relate to growers efforts to utilize AWEPP to address water quality, water conservation, and other natural resource related concerns.
- f) This AWEPP effort not only relies on traditional NRCS practice standards to achieve success, but utilizes current UC research to fine tune nutrient applications and offers increased grower funding to those who reach performance targets. There are two operating mobile labs servicing Central Coast growers with new operating protocols being developed for different irrigation systems. Flow meters are being encouraged to better monitor water use with 36 installed this year.

- g) Energy conservation on the farm is one of the primary benefits of this AWEPP. The irrigation system and nutrient management evaluations being offered lead to system improvements that reduce pumping costs and nutrient applications; with the associated reduced nutrient manufacturing costs.
- h) AWEPP partners have widely publicized this program to potential participants using print, web, and public meetings. 5 of the 2009 participants are either limited resource or beginning farmers. Additional outreach was done in under represented communities.

Suggested Changes to Original Proposal

Based on research done in the Salinas Valley by UC Cooperative Extension and a potential change to the Water Board's Conditional Waiver, there is an opportunity to reduce, primarily nitrate, leaching and runoff on thousands of acres of double-cropped lettuce. Higher cost share will be available to those willing to grow this common rotation with lower nitrogen inputs and higher irrigation efficiency. This reduced leaching and runoff will benefit the impaired Salinas River Watershed.

The technical foundation of this proposed change is production scale research in the Salinas Valley showing irrigation and nitrogen management techniques, when used together, can result in comparable or higher lettuce yields with significantly lower water and nitrogen inputs.