Project Title: **Farm Water Quality Short Courses**

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Background and goals

Implementation of agricultural management practices can help to prevent erosion, sedimentation and the transport of nutrients and pesticides into our coastal waterways. To support practice implementation by the agricultural community, the University of California Cooperative Extension (UCCE), in partnership with the Natural Resources Conservation Service (NRCS), has developed a technically sound, science-based Farm Water Quality Planning curriculum for industry-led watershed working groups of farmers. The course, designed to guide growers through the development of a farm water quality management plan for their operations, has been delivered to more than 1950 growers throughout the Central Coast to date.

Under this ten month proposal, January-October 2007, a minimum of 6 Farm Water Quality Planning Short Courses will be delivered in San Luis Obispo and Santa Barbara counties. A minimum of 150 farmers and ranchers will attend, and course participants will have the opportunity to develop Farm Water Quality Management Plans for their operations to identify agricultural water quality protection practices that prevent water quality impairments.

The project area will encompass San Luis Obispo and Santa Barbara counties. Project activities will help growers to meet requirements of the proposed new conditional waiver program and will also help to implement the California State Nonpoint Source Management Program, Central Coast Regional Quality Control Board's (Region 3) Basin Plans, Total Maximum Daily Loads, as well as others.

Scope of work

1. Delivery by UCCE, in partnership with NRCS, of the technically sound, science-based Farm Water Quality Planning curriculum to irrigated agriculture producers in San Luis Obispo and Santa Barbara counties. Farm Water Quality short courses with existing curriculum and supporting presentations will be delivered during the final months of the project; with the goal of completing a minimum of 6 short courses and educating at least 150 growers to complete water quality management plans.

    1.1. Secure registrations for a minimum of 6 classes with outreach partners, including but not exclusive to the Southern San Luis Obispo and Santa Barbara Counties Agricultural Watershed Coalition. Coordinate outreach materials advertising the course with all outreach partners.

    1.2. Continue support of a UCCE Farm Water Quality Program Representative to provide short course programs under the direction of UCCE academic staff.

    1.3. Coordinate details of individual courses with outreach partners, including but not exclusive to the Southern San Luis Obispo and Santa Barbara Counties Agricultural Watershed Coalition.

    1.3.1. Complete scheduling of pre-planning meetings, reservations for facilities and scheduling of speakers, development of presentations, additions to resource materials pertinent to course participants, and course evaluations.

    1.3.2. Coordinate noticing of meetings with outreach partners.

1.3.3. Develop certificate hours for appropriate licenses, including Pest Control Advisors, Certified Crop Advisors, and Private Applicators.

1.3.4. Coordinate completion and delivery of certificates verifying number of completed hours from short courses for participating growers

1.4. Design each short course to include a generalized schedule of three meetings.

1.4.1. Meeting 1 'Watershed Dynamics and Land Stewardship' – Introduce watershed and NPS pollution issues, discuss high priority watersheds, local impaired waterbodies, cooperative monitoring data, state and federal regulation of water quality, and compliance with the ag waiver. Discuss watershed and groundwater dynamics in relation to on-farm practices. Have participants break out into watershed groups to complete Basin Assessments of surface and ground water quality issues in their watersheds. Ask course participants to review farm goals and inventory their facilities and natural resources on farm maps prior to the next meeting.

1.4.2. Meeting 2 'Soil and Irrigation Management' – This session is designed for different production systems (i.e., vegetables & strawberries, floriculture/nursery, orchards, and vineyards). Demonstrate nonpoint source self-assessment process by performing an on-site evaluation at a field site location with a focus on irrigation and sediment management. Introduce self-evaluation techniques for management practices (i.e., photo point monitoring techniques).Introduce nonpoint source site assessments for both sediment and irrigation management and begin documentation of existing production practices that protect water quality. Ask course participants to complete nonpoint source site assessment sections before the third meeting.

1.4.3. Meeting 3 'Nutrient and Pesticide Management' – This session is designed for different production systems (i.e., vegetables & strawberries, floriculture/nursery, orchards, and vineyards). Demonstrate nonpoint source self-assessment process by performing an on-site evaluation at a field site location with a focus on pesticide and nutrient management. Introduce self-evaluation techniques for management practices (i.e., water quality tests). Ask course participants to complete farm/ranch management checklist with potential management practices and potential implementation schedules.

2. Revise and improve the effectiveness of the Farm Water Quality Planning short course curriculum and its delivery. The Farm Water Quality Farm Plan provides a template for individual growers to document watershed conditions, resource inventories, practices they currently use to address NPS, evaluations of their practices for NPS impacts, and implementation goals and timelines. Update Farm Water Quality Plan with new management goals and management practices.

2.1. Coordinate with UCCE and NRCS cooperators to generate or revise materials as needed. Send revised materials to suitable UCCE NRCS, Resource Conservation Districts, Regional Water Quality Control Board, and Farm Bureau cooperators for review. Incorporate necessary revisions. Update Farm Water Quality Plan with new management goals and management practices as they become available.

2.2. Adapt delivery methods to access diverse audiences, including support of translation of course materials for delivery to non-traditional clientele. Promote innovative methods for completion of Farm Water Quality Management Plans, including internet access.

2.3. Publish all resource materials to the website http://waterquality.ucanr.org.

2.4. Develop questionnaires to query short courses participants regarding course content and outcomes using standard social survey design and statistical analysis methods so that these

results can be correlated with follow up results collected at 2, 5, and 10 years in future projects.

Task Deliverables: 1.5 Agendas and Number of Attendees from 6 Farm Water Quality Short Course; 2.4 Summary of course survey data

Costs for San Luis Obispo/Santa Barbara Short Courses

	Cost per Course	Cost per 6 Courses
Salary .067 FTE @ $48,682	3262	19570
Benefits @ 22%	718	4305
Total Personnel Costs	3979	23876
Office suppplies (paper, printer charges, etc)	100	600
Total Direct Charges	4079	24476
Overhead @22%	897	5385
Total Costs	4977	29860

Program Rep Hours Devoted to one FWQ Course
Based on 2088 hrs/FTE = .067 FTE Salary and Benefits = $3,979 per course

Program Rep hours devoted to one course = 140
Does not include time spent on publication of course materials or development of curriculum

	pre-course	during FWQP	post-course	spread out
Outreach				
Correspondence with outreach partners	3	2		
Alerting local cooperators	1			
Compiling/updating database for outreach	2			
On phone with (prospective) participants	6	2	2	
Grower meetings	2			
Newsletter blurbs	1			
Additional outreach - pcas, radio...	2			
Updating website calendar & reg forms	1			
Mailings of registration form - incl. make-ups	3			
Mailings of registration confirmation	2			
Course Materials				
Organizing & reproducing support materials	2			
Ordering supplies	1			
Producing registration form	1			
Producing registration confirmation + maps	2			
Producing agenda	2			
Producing course sign-in sheet	1			
Producing CE sign-in sheets	1			
Producing daily evaluations	1			
Producing resources directory	1			
Preparing basin talk + packets	2			
Room rental paperwork + signed	1			
Certificates generated, signed, packet out			3	
Correspondence with Speakers				
Inviting speakers	3			
Assisting speakers prep	8			
Thanking speakers & hosts			2	
FWQP Short Course Logistics				
Travel to programs @ 4 hours per session		12		
Coordinating with partners	4			
Securing classroom locations	2			
Securing field session locations	4			
Applying for/assigning CE to each session	1			
Collecting and submitting reg fees	1	1		
Purchasing snack+drink & paperwork	2		1	
A/V, materials, snack - loading & unloading		3		
Classroom + field set up & take down		7		
Facilitating		15		
Driving - average	1	5	1	
Collecting presentations		1		
CE calc. & sent to Ag Commiss + DPR			3	
Updating database			1	
Eval summaries			1	
Other, underestimating, interruptions				8
Mandatory 30-min break/day				6
Totals	64	48	14	14

Total Hours	**140**
Salary .067 FTE @ $48,682	3262
Benefits @ 22%	716
Total Personnel Costs	3979