PUBLICATION 8052 FWQP FACT SHEET 1.1

UNIVERSITY OF CALIFORNIA
Division of Agriculture and Natural Resources
http://anrcatalog.ucdavis.edu

In partnership with
NRCS Natural Resources Conservation Service
http://www.nrcs.usda.gov

Farm Water Quality Planning

A Water Quality and Technical Assistance Program for California Agriculture

This FACT SHEET is part of the **Farm Water Quality Planning (FWQP)** series, developed for a short course that provides training for growers of irrigated crops who are interested in implementing water quality protection practices. The short course teaches the basic concepts of watersheds, nonpoint source pollution (NPS), self-assessment techniques, and evaluation techniques. Management goals and practices are presented for a variety of cropping systems.

UC PEER REVIEWED

Introduction:

Farm Water Quality Planning Short Course Objectives

JULIE FALLON is UC Cooperative Extension Farm Water Quality Planning Program Representative, San Luis Obispo County.

PROJECT BACKGROUND

Section 303(d) of the Federal Clean Water Act requires that each state develop a list of water bodies that do not meet water quality standards without application of additional pollution controls. Many water bodies on California's Central Coast and elsewhere in the state either do not fully meet these water quality standards or do not support such beneficial uses as aquatic habitat, due largely to impacts from nonpoint source pollution (NPS). The most common reason for listing these water bodies is that they contain excessive nutrients, pesticides, sedimentation, or some combination of the three.

Although NPS impacts are not attributable solely to agriculture, potential NPS impacts from agriculture have been identified. The Monterey Bay and Morro Bay regions in particular have been identified as areas where NPS pollution attributable to agricultural practices has the potential to damage natural resources and water quality. The Salinas Valley is under threat of adjudication from the California State Water Resources Control Board (CSWRCB) due to seawater intrusion into the water table and widespread contamination of groundwater by nitrates. The Central Coast is very likely to be subjected soon to regulatory restrictions intended to reduce NPS pollution from agriculture.

Each state is required by section 303(d) of the Federal Clean Water Act to make a list of water bodies that do not meet water quality standards. Each state must then develop a Nonpoint Source Management Program for these waterbodies. Although agriculture has long been concerned with potential water quality impacts from agricultural production, this activity has increased the industry's awareness of its need to take a lead role in addressing potential NPS problems.

Rangeland managers responded to NPS issues in California in the 1980s. The resulting California Rangeland Water Quality Management Plan (CRWQMP) that was approved by the CSWRCB in 1995 is an example of a proactive, industry-backed effort to address NPS issues associated with rangeland. The Ranch Water Quality Planning (RWQP) short course curriculum brought together the results of nearly ten years of cooperative effort between industry groups, government agencies, the Natural Resources Conservation Service, and the University of California. The RWQP has successfully educated over 500 producers who together control more than 1 million acres of privately owned California rangeland. Based on the success of the RWQP, we have created the Farm Water Quality Planning short course, patterned after the RWQP short course curriculum but tailored to the needs of farmers.

Six county Farm Bureau offices have cooperated to act as a coordinating organization for local growers within specific watersheds to develop voluntary conservation plans that address NPS issues. The involvement of local agencies helps ensure that the resulting plans will satisfy CZARA, NPS, and TMDL requirements.

PROJECT GOAL

The Central Coast of California provides one of the most diverse agricultural areas in the state. Crops include apples, avocados, broccoli and other cole crops, citrus, wine grapes, greenhouse and field-grown flowers, lettuce, oriental vegetables, vegetable transplants, and strawberries. Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, San Benito, Santa Clara, and San Mateo Counties, combined, produced crops valued in excess of $3.5 billion in 1997. Unlike many other irrigated agricultural areas in California, much of the agricultural land on the Central Coast occurs on soils that are susceptible to erosion due to slope. In addition, much of this susceptible land is in watersheds that drain into the Monterey and Morro Bay estuaries or into rivers that have been listed for salmon and steelhead protection.

The goal of FWQP training is to help growers in their efforts to reduce NPS pollution that originates from production practices associated with irrigated agriculture on the Central Coast. Specific objectives are to ensure grower participation in water quality training for irrigated agriculture, including natural resource inventories and nonpoint source self-assessments, and to encourage growers to complete conservation plans that integrate their production goals and management practices with water quality, habitat conservation, and soil conservation goals.

Presentations and binder materials will include the following information:

- assessment and prioritization of crop production goals, natural resource and water quality planning goals, and quality of life goals for the farming operation
- facilities inventory, including buildings, roads, structural improvements, wells, and irrigation systems
- natural resources inventory, including climate, soils, hydrology, vegetation, and wildlife
- education on hydrologic functions, dynamics of watershed and aquifer processes, water quality concepts, programs, and regulations
- record keeping of farm operations, including cropping patterns and calendars of operations
- farm water quality assessment, including a summary of potential nonpoint sources of sediment, nutrient, pesticide, and salinity pollution
- identification and evaluation of water quality impacts and management practices for NPS mitigation
- potential management practices to address the identified problems

This information will be used to complete a confidential Farm Water Quality Plan. The plan will consist of a brief statement of goals, an inventory of resources, a problem assessment, a listing of existing and/or alternative management practices, and a self-evaluation program.

ACKNOWLEDGMENTS

The author gratefully acknowledges the assistance of Mary Bianchi, UCCE Farm Advisor, San Luis Obispo County, and Melvin George, UCCE Range and Pasture Specialist, Department of Agronomy and Range Science, UC Davis.

FOR MORE INFORMATION

You'll find detailed information on many aspects of field crop production and resource conservation in these titles and in other publications, slide sets, and videos from UC ANR:

Nutrients and Water Quality, slide set 90/104

Protecting Groundwater Quality in Citrus Production, publication 21521

Sediments and Water Quality, slide set 91/102

To order these products, visit our online catalog at http://anrcatalog.ucdavis.edu. You can also place orders by mail, phone, or fax, or request a printed catalog of publications, slide sets, and videos from

University of California
Agriculture and Natural Resources
Communication Services
6701 San Pablo Avenue, 2nd Floor
Oakland, California 94608-1239
Telephone: (800) 994-8849 or (510) 642-2431
FAX: (510) 643-5470
E-mail inquiries: danrcs@ucdavis.edu

An electronic version of this publication is available on the ANR Communication Services Web site at http://anrcatalog.ucdavis.edu.

Publication 8052

pr-9/02-WJC/CR ISBN 978-1-60107-230-6

UC PEER REVIEWED

This publication has been anonymously peer reviewed for technical accuracy by University of California scientists and other qualified professionals. This review process was managed by the ANR Associate Editor for Natural Resources.