



The California Dairy Quality Assurance Program (CDQAP) is a government, academic and industry partnership whose mission is to encourage science-based dairying practices which promote the health of the consumer, the environment and dairy livestock.



Kevin Abernathy and Andy Zylstra of California Dairy Campaign show off Zylstra's CDQAP "Environmentally Certified" roadside sign with CDQAP Associate Director Denise Mullinax

## California Dairy Campaign joins CDQAP partnership

California Dairy Campaign recently joined as a full partner in the California Dairy Quality Assurance Program Environmental Stewardship Module.

"We appreciate very much CDC's willingness to cooperate with our other partners from government, academia, conservationists and the dairy industry in pursuing our shared goals," said CDQAP Executive Director Dr. Michael Payne.

CDC joins a broad array of partners committed to the program goals, which include providing science-based education, training and certification programs in environmental stewardship. Other modules in CDQAP include, animal welfare, disease prevention, food safety and farm security.

"Our producer members are committed to being good stewards and good neighbors," said Kevin Abernathy, CDC Executive Director. "We recognize the high value of working with our partners in government and academia to provide producers the best information and tools possible. Our organization will continue to support this important program."

## CDQAP to assist dairy producers in meeting water quality challenge

In May, the Central Valley Regional Water Quality Control Board adopted historic new regulations for existing dairies. The new rules set a much higher bar than ever before for dairy environmental performance – with some actions needed right away, and others phased in over time.

The process won't be easy, but it is the law and the intent is to protect the Central Valley's vital groundwater resources. CDQAP plans a major outreach effort this fall to help dairy producers understand the requirements and reach compliance as quickly and easily as possible.

"We recognize that these rules are scary for many dairy producers, but with good information, tools and help, most producers are up to the challenge" said Ann Silva, Chairwoman of the CDQAP Advisory Board. "It is our goal to make sure that every producer in the Central Valley has access to help and information. More importantly, we will aim to make sure producers truly understand the issues related to dairy manure management so they can control their own destiny."

**'We are working to help each dairy producer meet the challenge.'**

**-Denise Mullinax, CDQAP**

The CDQAP is planning the largest outreach and education effort in its history, with free workshops in every Central Valley dairy county this fall. The intent is to provide timely, accurate information and individual assistance. The workshops will assist dairy operators with report completion, and understanding regulatory requirements, timelines and compliance options.

"There is no doubt this is a big challenge for our industry," said Denise Mullinax, Associate Director of CDQAP. "We are working very closely with the Regional Board staff, dairy producer associations, the University of California and others to make these workshops efficient and useful, and to help each dairy producer in meeting the challenge."

The fall workshops will be an important first step, but far from the last step.

"We are planning a series of educational courses to assist dairy producers to better understand what they need to do each step of the way," said Dr. Deanne Meyer, University of California Livestock Waste Management Specialist. "We expect at least one course per year for several years with supplemental workshops about specific tools such as flow-meters and computer software programs."

As workshop locations and schedule are finalized, notices will be sent to all dairy producers in the Central Valley. Producers are also advised to watch their trade association, processor and UCCE newsletters for updates.

## What producers need to know about E. coli

It's been 25 years since *E. coli* O157:H7 was first recognized as a cause of human illness. While consumer education and packing plant changes have resulted in a nearly 30 percent reduction in human *E. coli* infections, the bacteria still remains a major cause of illness.

Most of the hundreds of strains of *E. coli* bacteria in nature do not cause disease in humans and in fact play an important role in digestion. Unlike "friendly" *E. coli* however, the O157:H7 strain produces a toxin which can result in bloody diarrhea, kidney failure and even death. While O157:H7 has been isolated from a wide variety of wild and domestic animals, excretion rates are highest in

cattle and wild swine.

With increasing frequency, human disease outbreaks are being associated with fresh produce such lettuce, spinach, melons, and vine tomatoes. These products are particularly vulnerable because they are typically eaten raw, without a heat processing step.

In general, the risks of *E. coli* from dairy cattle manure contaminating fresh produce is low, primarily because most crops grown on dairy farms are used for cattle feed. Investigation into one of last year's *E. coli* outbreaks however, suggest that *E. coli* contamination in lettuce may have originated from nearby cattle operations.

On-farm control is complicated by the

### Common-sense steps:

- **Never use manure or manure water to fertilize human food crops that will not be heat-treated.** In cases where manure is used to fertilize food (such as organic crops), manure should be treated to kill all pathogens.
- **Survey neighboring farms to learn what crops are grown.** If any fresh produce crops such as lettuce or spinach are grown, make sure that manure and manure water from the dairy does not come into contact with these crops or irrigation water used for these crops. Cooperate with neighboring farmers to ensure your protection and theirs.
- **Wait at least twelve months after fertilizing with manure before growing sensitive crops.** Studies suggest a one-year waiting period should be quite conservative.
- **Obey all water quality laws.** Dairy producers are required to keep manure wastewater on their own property and to prevent any offsite discharges of manure or manure water.

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# Don't wait until winter to prevent stormwater problems- steps taken now can prevent overfull lagoons

Taking appropriate steps when skies are clear can help dairy producers avoid overfull ponds and other situations that can lead to an illegal discharge.

The key is to closely monitor retention ponds and keep track of storage capacity, according to Dr. Deanne Meyer, livestock waste management specialist at UC Davis.

"Decisions made in September and October regarding overall parlor water management may affect your ability to manage water during December and January," she said.

A first step is to have a good handle on the current capacity of the retention pond, and a reasonably accurate idea of daily water use that drains to the pond. It also is important to understand the typical rainy season precipitation in the area, amount of surface that drains to the pond, and typical runoff and evaporation that can be expected. Much can be learned from analyzing the activity in previous winters: Has the pond been able to retain all the parlor water and runoff during the winter season?

Pond capacity calculations themselves can be complicated, but are necessary to understand how much space needs to be available in the pond before rains begin. This is critical for complying with water quality regulations, which require that ponds reserve capacity to hold precipitation and runoff from a large storm, called a 25-year, 24-hour storm. That literally means the largest amount of rainfall expected in one 24-hour period that can be expected every 25 years. "Truly understanding inputs to ponds is the first step in preventing a situation where there is an illegal discharge from the pond," said Dr. Meyer. "There are various strategies that can be used depending on the situation to improve the system. These can



Allowing dairy lagoons to overflow, as pictured above, is a violation that can result in fines and other criminal penalties.

involve relatively simple steps, such as diverting clean stormwater or employing conservation measures on water use at the dairy."

In addition to CDQAP tools, the Preliminary Dairy Facility Assessment due by December 31, 2007 as part of the new Waste Discharge Requirements for dairy facilities will provide producers with a rough cut estimate of pond capacity needs. Dairy producer trade associations often can assist producers in making the calculations, or producers can contact the University of California Cooperative Extension for assistance. Qualified engineering firms can also provide help, particularly if modifications are needed.

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Producers need to balance storage capacity needs with liquid manure system functionality.

**Common parlor water use areas contributing to overfull lagoons include:**

- **Inefficient milk cooling and/or milking equipment (water ring vacuums, water-cooled condensing units, improperly sized plate coolers, etc.)**
- **Overuse of sprinkler water in the wash pen (total cow wash time too high, not using automated sprinkler timers, etc.)**
- **Overuse of cow deck wash water**
- **Overuse of drop hoses**
- **Unmonitored Clean In Place (CIP) wash water levels**
- **Excessive frequency (and volume) of flushing milking parlor floor**

For more information regarding prevention of storm water discharges and improving lagoon capacity, producers are advised to contact their trade association, milk processor or local UC Cooperative Extension office.

## ...E. coli

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fact that O157:H7 causes no disease in cattle, there is no blood test for shedders and cattle excrete the bacteria only intermittently. In farm trials, intervention practices such as water trough cleaning and feed changes have failed to demonstrate substantial control.

### CDQAP Partners:

*California Environmental Protection Agency • California Department of Food and Agriculture  
The California Resources Agency • University of California/UC Cooperative Extension  
State Water Resources Control Board California • Department of Fish and Game  
U.S. Department of Agriculture • Natural Resources Conservation Service • U.S. Environmental Protection Agency  
California Manufacturing Milk Advisory Board • California Farm Bureau Federation  
California Dairy Campaign • Western United Dairymen • Milk Producers Council • Sustainable Conservation*

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