

The purpose of this program is to share recent applied research results from northern California on the: 1) quality of water in pasture and rangeland runoff, streams and rivers, and the Sacramento/San Joaquin Delta, 2) potential risks range and pasture management pose to water quality and management options to reduce these risks; and 3) use of vegetative filter strips and wetlands to clean-up agricultural runoff. Provide practical management options to protect water quality, and comply with water quality regulatory programs.

Anyone interested in water quality, range, and pasture management would benefit from this program. This includes livestock/range/pasture managers, agricultural water quality coalitions, agricultural and environmental advocacy organizations, irrigation districts, resource conservation districts, municipal water districts, water quality regulatory agencies, natural resources management and conservation organizations, and environmental consulting firms among others.

Agenda

9:00 – 9:30 am Registration – Coffee, Breakfast Snacks

9:30 am Water quality concerns associated with livestock, range and irrigated pasture management.

Dr. Rob Atwill, Professor of Environmental Animal Health and Medical Ecology, School of Veterinary Medicine, UC Davis

Ambient conditions and monitoring strategies for waterborne pathogens and indicators in California waterways. Material to be covered will include animal-derived microbial pollutants of concern for drinking water; which pathogens cause waterborne outbreaks in the U.S.; background levels of bacterial indicators and various pathogens in California surface water supplies ranging from high Sierra meadows down to the Delta; validity of using bacterial indicators to signal the presence of pathogens and why indicators often do not work.

Dr. Randy Dahlgren, Professor of Biogeochemistry, Department of Land Air and Water Resources, UC Davis

Ambient conditions and monitoring strategies for nutrients in California waterways. Material will cover nutrient pollutants of concern (e.g., carcinogenic by-product formation from DOC/DON, nitrate and ammonia toxicity). It will incorporate information from the small sub-watershed to large basin scale. The temporal variation in these pollutants – inter-annual, seasonal, storm event, and diel will be discussed.

10:30 am Break

10:45 am Livestock, range, and pasture management practices to decrease risks to water quality.

Dr. Rob Atwill, Professor of Environmental Animal Health and Medical Ecology, School of Veterinary Medicine, UC Davis

Herd health management practices for improving microbial water quality. Material to be covered will include animal-related management strategies to reduce animal infection and pasture runoff with waterborne pathogens (e.g., vaccination, calving season, sources of infection).

Dr. Ken Tate, Rangeland Watershed Specialist, Department of Plant Sciences, UC Davis

Grazing and irrigation management practices for improving pasture and rangeland runoff water quality. Material to be covered will include grazing and irrigation management risk factors on rangeland and irrigated pastures, and management options to mitigate these risk factors.

Dr. Toby O'Geen, Soil Resource Specialist, Department of Land Air and Water Resources, UC Davis
Water quality contaminant transport from soils to surface water in annual rangelands. Discuss the critical soil properties, soil landscape relationships, hydrologic flow paths, and temporal dynamics in soil moisture determining pollutant transport.

12:30 Lunch

1:30 pm Use of vegetative filter strips and wetlands to filter pollutants in runoff from rangeland and irrigated pasture.

Dr. Ken Tate, Rangeland Watershed Specialist, Department of Plant Sciences, UC Davis

Vegetation and wetlands to filter pollutants transported in irrigated pasture runoff. Material will include discussion of the efficiency of filter strips and wetlands to filter various pollutants in pasture tailwater. Several examples of how to implement various combinations of grazing and irrigation management measures in conjunction with buffers will be presented.

Dr. Rob Atwill, Professor of Environmental Animal Health and Medical Ecology, School of Veterinary Medicine, UC Davis

Vegetation management practices to filter microbial pollutants in runoff from rangeland and confined feeding areas. Material will include discussion of the efficiency of filter strips and wetlands to filter various pollutants in runoff from annual rangelands. Several examples of how to implement various combinations of management measures in conjunction with buffers will be presented.

Dr. Toby O'Geen, Soil Resource Specialist, Department of Land Air and Water Resources, UC Davis
Constructed wetlands to filter pollution in irrigation runoff. Discuss contaminant removal efficiencies and the factors that affect contaminant removal efficiency of wetlands. Discuss factors to consider when constructing a wetland: water supply, mosquito abatement, vegetation type and management, sediment buildup, flow regime, water depth, etc.

Pre-Registration must be received by Friday, January 9th. Registration is limited to 75 people.

There is no cost for this workshop.

Name (s) _____

Business _____

Address _____

City/State/Zip _____

Telephone _____

Email _____

Number Attending _____

Mail this registration to UCCE Shasta County, 1851 Hartnell Avenue, Redding, CA 96002.

Confirmation will be mailed upon receipt of registration

Directions:

The Red Bluff Community Center is located 135 miles North of Sacramento and 125 miles South of the Oregon border on Interstate Highway 5. Coming either from the North or from the South, take the Diamond Avenue exit (#647 B). Turn left on S. Main Street (I-5-BR). Turn right on Luther Rd. Turn left on South Jackson Street.



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Cooperative Extension

Shasta and Tehama Counties

Co-sponsored by the California Cattlemen's Association, the California Rangeland Conservation Coalition, and the Shasta-Tehama Watershed Education Coalition

Present

Water Quality, Range, Pasture, and Livestock Management Workshop

*Friday, January 16, 2009
9:30 am - 3:30 p.m.*

To be held at

**Red Bluff Community Center
1500 South Jackson Street
Red Bluff, CA**

For more information contact:
Josh Davy (jsdavy@ucdavis.edu) at 530-527-3101,
or Larry Forero (lcforero@ucdavis.edu) at 530-224-4900

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