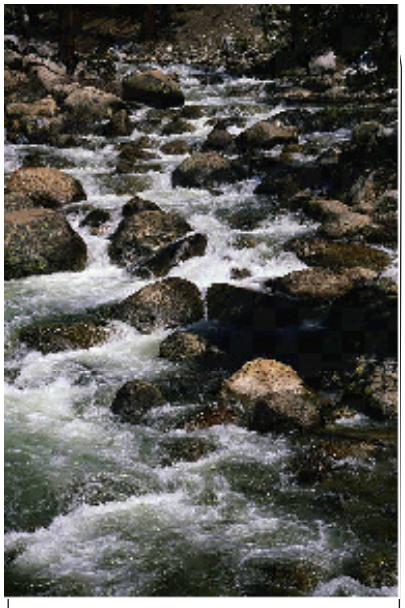

Irrigated Lands Waiver

Yolo County Farm Bureau Education Corporation

Subwatershed Program

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Volume 2, Issue 1

Coalition Update

E.Coli Study Results Indicate Human Source

The most common exceedances of State water quality standards in the Coalition region are for E.coli bacteria. While we have no verifiable information on what caused these exceedances preliminary results from a DNA mapping study commissioned by the Coalition found human sources contributing the highest amounts of bacteria in the waterways tested. Potential sources of human DNA are leaky rural septic systems, illegal dumping of human waste, water treatment plant discharges or other sources. The Coalition is funding a second study for winter 2007 to determine sources of E. coli during storm events (the previous study was taken during the irrigation season).

2007 Membership Dues

Membership dues in 2007 will remain at $2.00 per acre for all irrigated lands. If you haven't already received your renewal invoice it should be coming soon. If you don't receive it within two weeks you need to call our office at 530.662.6316.

This year interest will be charged for late payments.

Your fees are used to pay for monitoring costs and for the operating costs to administer the program. Included in the fees are the 12 cent per acre fee assessed on irrigated acreage by the State Water Resources Control Board.

2006 Monitoring

The results were fairly positive for the 2006 monitoring year. Three locations were monitored in 2005 and 2006 - at I-5, at I-80 and we shared a site with Solano County at the Z Drain.

There were no pesticide exceedances found in Yolo County. At last fall's landowners and grower meetings we reported on the exceedances that did show up in Yolo County:

E. coli – Elevated *E. coli* bacteria showed up in many samples. We approved DNA testing to determine the sources of the *E. coli*. Preliminary results for the samples collected in September showed that the *E. coli* was mostly of human origin but also included varying amounts from bird sources, and little or no bovine sources. Further testing is being done to determine if the avian is wildlife or domestic. We will let you know the results.

Dissolved oxygen – low flows and high temperatures caused water quality problems.

Electrical conductivity – salts have been and will continue to be a problem in the Central Valley. Everyone has to work to find a solution so that future generations can continue to farm. The State of California has acknowledged this problem and implemented a Central Valley Salinity Policy Group to develop a regional salinity management plan.

Boron – the Yolo County Flood Control and Water Conservation District is helping provide data showing boron is naturally occurring in most of Yolo County and levels almost always exceed the existing standards. We thank the YCFCWCD for their assistance.

2007 monitoring

After monitoring the I-5, I-80 and Z Drain sites for two years with only the exceedances listed above showing in tests, the Regional Board asked that we move our test sites.

The new sites selected for monitoring in 2007 are at Willow Slough (near Road 113) and at the diversion dam in Capay on Cache Creek. We also continue to share a monitoring site at Shag Slough with the Solano RCD.

Please see the back page for the Sacramento Valley Water Quality Coalition (SVWQC) Exceedance Report for the February 2007 Storm Event.

Final Results From 2006

The Sacramento Valley Water Quality Coalition (Coalition) monitoring results from 2006 were fairly positive. Where exceedances occurred the Coalition has implemented its *Landowner Outreach and Management Practices Implementation Communications Process for Monitoring Results* (visit www.svwqc.org for more details).

The Coalition monitored 32 sites in the Sacramento Valley in 2006 for various water quality constituents. The following water column exceedances for were found[1]:

- Field parameters were monitored a total of 206 times each; exceedances occurred 22 times for dissolved oxygen, 15 times for pH and 12 times for conductivity.
- Color, turbidity, total dissolved solids (TDS), total suspended solids and total organic carbon were also monitored 206 times each; exceedances occurred 10 times for TDS only.
- Trace metals were monitored 165 times; exceedances occurred 6 times for boron and 1 time for selenium.
- Organophosphate pesticides were monitored 156 times; exceedances occurred 4 times for diazinon and 1 time for chlorpyrifos.
- Organochlorines, triazines and pyrethroids were monitored 121 times; exceedances occurred 2 times for DDE and 1 time for simazine.
- Pathogens indicators: E. coli was monitored 206 times; exceedances occurred 38 times.
- Ceriodaphnia, Pimephales and Selenastrum were monitored 117 times; exceedances occurred 9 times for Ceriodaphnia and 1 time for Selenastrum.
- No exceedances of nutrients, glyphosate, paraquat or carbofuran were found.

For complete results view the 2006 storm and irrigation season semi-annual reports. Both are available on the Coalition Web site, http://www.svwqc.org.

[1] Does not include sediment toxicity results or field parameter results during sediment toxicity testing.

Water News
Yolo County Farm Bureau Education Corporation Subwatershed Program

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Yolo County Farm Bureau Education Corporation thanks those who have made a donation to assist in issuing this newsletter.

Deadline to Join a Coalition has Passed without Regional Board Approval

The process and application forms for irrigated landowners and operators seeking to join Coalition Groups after the December 31, 2006 deadline have been established and posted on the Regional Water Quality Control Board's Web site. Please go to *http://www.waterboards.ca.gov/centralvalley/programs/irrigated_lands/index.html* to access the link that will take you to the section that describes process and includes links to the application forms.

If growers have questions or would like information and forms mailed to them, please have them call the Irrigated Lands Program telephone line at (916) 464-4611 or send an email to IrrLands@waterboards.ca.gov.

2007 Monitoring Plan

On January 10, the Sacramento Valley Water Quality Coalition submitted its 2007 Monitoring Plan to the Central Valley Regional Water Quality Control Board. The Coalition will be submitting water quality monitoring data for thirty-one sites throughout the Sacramento Valley. Of the thirty-one sites, ten sites will be monitored by Coalition partners: the Sacramento River Watershed Program, Putah Creek Watershed Group, Northeastern California Water Association and the Upper Feather River Watershed Group. Of the thirty-one sites to be monitored, thirteen will be new sites.

The monitoring plan for 2007 is a more aggressive approach to completing the monitoring requirements of the Central Valley Regional Water Quality Control Board for monitoring intermediate drainages. This more aggressive approach is based on replacing previously monitored sites with high priority sites in intermediate size drainages, and conducting concurrent monitoring of Phase I (toxicity, physical parameters, and pathogens) and Phase II (pesticides, nutrients and metals) parameters at most new locations.

For a copy of the 2007 Monitoring Plan contact Tina Lunt at 916-442-8333 or visit the Coalition's web site at: http://www.svwqc.org.

E. coli Monitoring / DNA

The Sacramento Valley Water Quality Coalition in September initiated a Bacterial Source Identification Study. The primary objective of the study is to identify the categorical sources (i.e., which species) are contributing to fecal contamination resulting in the observed exceedances of the Basin Plan *E. coli* water quality objective[1].

Exceedances of the *E. coli* objective were observed at nineteen locations throughout the Coalition area in 2006. Of the nineteen sites, nine sites were selected based on two main criteria: (1) a history of multiple exceedances of the *E. coli* objective (235 MPN/100mL) in the amendment to the Central Valley Region Basin Plan; and (2) broad representation of regional differences in hydrology, predominant crop types and cultural practices.

This study will quantify the amount of species-specific *Bacteroidales* (not E. coli, but also live in the intestines and can be used to identify source) from various sources such as human, cows, and birds. This study will also quantify *E. coli* bacteria at these same locations. The results of the study will be used to quantify the proportion of bacterial contamination from different potential source categories in the subwatershed. The results will also support the second objective of the study, which is to evaluate whether contributing sources of bacterial contamination are agricultural.

The evaluation of the results will be conducted through cooperative consultation with subwatershed representatives knowledgeable of local conditions and with Regional Board staff. If agricultural sources are judged to cause or significantly contribute to the *E. coli* exceedances, the Coalition will implement the procedures documented in their *Landowner Outreach and Management Practices Implementation Communications Process for Monitoring Results, 2007*. The specific actions implemented by the Coalition will be determined by the categories and types of bacteria sources determined to contribute to exceedances, and by the cultural practices, crops, and other drainage-specific factors in each drainage or subwatershed.

One sample was collected in September and two additional samples will be collected, one during the storm season and one more in the irrigation season (May). Preliminary results from September indicate that there were no contributions from cows.

[1] Although the *E. coli* objective has been adopted as an amendment to the Central Valley Basin Plan by the Central Valley Regional Water Quality Control Board, the amendment has not been approved by the State Board, Office of Administrative Law and the US Environmental Protection Agency and is therefore not an effective Basin Plan objective.

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SVWQC EXCEEDANCE REPORT

SAMPLE DATE AND SITES

The Sacramento Valley Water Quality Coalition (Coalition) conducted irrigation season water sampling in Yolo County on February 10, 2007 as required by the Irrigated Lands Conditional Waiver and the Coalition's Monitoring and Reporting Program Plan (MRP). Two of the three sites monitored had exceedances of either the water quality objectives or narrative interpretation limits.

Subwatershed	Site ID	Site	Sample Dates
SolanoYolo	CCCPY	Cache Creek at Capay Diversion Dam	02/10/07
SolanoYolo	WLSBP	Willow Slough Bypass at SP	02/10/07

RESULTS

Exceedances that are being addressed by ongoing studies, management plans, or TMDLs include the following:

- Exceedances of boron, conductivity (EC), and TDS.

Exceedances that are not being addressed by ongoing studies, management plans, or TMDLs include the following:

- An exceedance of the California Toxics Rule (CTR) selenium criterion (5 ug/L) in Willow Slough.
- An exceedance of the Basin Plan objectives for pH (6.5-8.5) was observed in the Willow Slough, pH of 8.7.

Exceedances of chemical and microbiological water quality objectives for samples collected Feb. 10, 2007

Site ID	Sample Date	Analyte	Result	Units	WQO[1]
CCCPY	02/10/07	Boron, total	3100	ug/L	700
WLSBP	02/10/07	Boron, total	2600	ug/L	700
CCCPY	02/10/07	Conductivity	824	uS/cm	700
WLSBP	02/10/07	Conductivity	1181	uS/cm	700, 900
WLSBP	02/10/07	pH	8.7	-log[H+]	6.5-8.5
WLSBP	02/10/07	Selenium, total	7	ug/L	5
WLSBP	02/10/07	TDS	650	mg/L	450, 500

Table 1 Notes: [1]Water Quality Objective or Narrative Interpretation Limit