

IRRIGATION NEWS

Kings River Remains Clean

The quality of the water within the Kings River Basin is of utmost importance to the users of this valuable resource. From those who use the water to irrigate the crops that help feed and cloth the world, to those who use the cool waters for recreation during the hot summer months, and to those who enjoy quiet days fishing, the inherent quality of the Kings River is vital.

Over the last 18 months of testing by KRCD, the lab results show that agricultural materials are not present within the Kings River system. The quality of the water remains remarkably constant as it travels from Pine Flat to the Tulare Lake bed, with only a slight increase in electrical conductivity as the river flows south.

The Water Code specifies that those who discharge water must file a written report of said discharges and submit plans for the reduction of said discharges in the future. Realizing the enormous number of growers that such a requirement covers, the State Water Quality Control Board approved a program where the reporting of such discharges would be waived, as long as certain conditions were met. This program has become the Irrigated Lands Regulatory Program.

The most common misconception of this program is that it allows those who have runoff exiting their property, be it over-irrigation or storm water flow, to continue to discharge as before. Nothing could be further from the truth. The program mandates, through the Monitoring and Reporting Program (MRP), that specific chemicals be tested for in the waters. If specific chemicals are found, their source is to be identified and mitigation measures (Management Plans) are to be submitted and their effectiveness evaluated. Any negative impact on the quality of surface waters is subject to the regulations.

The Kings River Conservation District (KRCD) is the lead agency for the Kings River Sub-Watershed, a subgroup of the Southern San Joaquin Valley Water Quality Coalition (SSJWQC). This Coalition covers the service areas of the four major watersheds that feed the Tulare Lake Basin. The KRCD conducts the required water and sediment sampling at approved monitoring sites, compiles the data, and submits a written report (combined with similar reports from the other sub-watersheds) to the Regional Water Quality Control Board (Regional Board).

A grower has three options under this program: (1) become a member of an established or newly created Coalition group; (2) file as an individual with the Regional Board; or (3) seek to have their operation recognized as a non-discharger. Coalitions work cooperatively to monitor specific areas (or crops), share costs, and handle the reporting process. An individual filer would do it or contract it out themselves.

The Regional Board mandates almost 70 tests be performed at each sampling event. The tests range

from simple water parameters, electrical conductivity, temperature, dissolved oxygen, and pH to actual chemical composition tests (nutrients, metals, and herbicides), color and turbidity measurements, and aquatic organism toxicity tests. These tests are performed monthly during the irrigation delivery season along with two storm event samples, conditions permitting. Detections of chemicals or the exceedance of physical parameter limits specified in the Tulare Lake Basin Water Quality Control plan are reported to the Regional Board.

Although the Kings River remains clean, growers must continue to maintain practices to reduce runoff. It is critical that growers continue to look for ways to minimize the risk of off-site water movement, especially during the winter months. The control of sediments is just as important as potential chemical residues.

Storm water runoff is of concern due to the washing effects of falling rain and the uncontrollable nature of the runoff afterward. Dormant sprays are of major concern because they tend to be fresh applications, but previous applications being removed from foliage is also of concern. Cultural practices and physical controls hold the most promise in reducing the risk of offsite movement for these constituents.

Research suggests that settling ponds work extremely well in preventing sediment discharge. Grassy strips have been shown to remove considerable amounts of materials (particularly nutrients), as well as reducing sediment movement. The use of organic materials (compost, straw bales) to absorb other chemicals from the water stream has yet to be studied locally.

These techniques work for “flow-through” runoff designs, where the water is allowed to leave the property. Another option is to contain the water within a basin for percolation into the soil or evaporation. With this option, discharge is not a factor, as the water does not reenter the surface system. Space is critical for this method, as adequate storage must be available should a strong storm event occur.

The Kings River Sub-Watershed is asking that growers return the questionnaires recently mailed. Not all growers will receive this questionnaire. The responses can help us determine what type of control measures may work, what modifications to existing management practices can be made, and how to best minimize potential discharges.

Any ideas that you as a grower have on this topic would be appreciated. You know your ground. You know how to manage the application of irrigation water and what happens when it rains. Ask yourself, “What can I do to further reduce the risk of offsite movement during irrigations or storm events?” Send your ideas to Eric Athorp, either by email (eathorp@krcd.org) or to the KRCD office address shown on the mailing label.