Groundwater Substitution
Issue No. 16 - DRAFT Water Quality Monitoring

Background

The purpose of a groundwater quality monitoring program for water transfers in 2010 is to detect significant changes in groundwater quality as a result of transfer-related pumping. The extent of groundwater quality monitoring needed to assess effects will depend on the potential movement of reduced quality water in response to transfer pumping. The extraction of groundwater from areas that are relatively close to reduced quality conditions can require more intensive monitoring than areas that have documented good groundwater water quality.

For water transfers in the Sacramento Valley in 2010, it is anticipated that both agricultural and municipal sellers will participate. It is recognized that municipal sellers already must meet stringent water quality requirements regulated by the California Department of Public Health under the California Code of Regulations Title 22. Since Title 22 requires comprehensive water quality testing at regular intervals, the current testing is considered sufficient.

Recommendation for 2010

- Agricultural sellers, desiring to participate in 2010 water transfers should measure specific conductance[1] in samples from each participating production well. Samples should be collected when the seller first initiates pumping, monthly during the transfer period, and at the termination of transfer pumping.

- The sellers should record water quality meter calibration information, water quality measurements, and other site-specific information relevant to water quality on the field log provided by DWR and submit the water quality sampling results monthly to the appropriate DWR and Reclamation contacts.

- Agricultural sellers are encouraged to collect groundwater samples at least once during the transfer at the participating pumping wells to monitor a more comprehensive suite of water quality parameters that can adversely impact agricultural water supply. In addition to the standard physical parameters of ph, temperature and specific conductance, these parameters include standard minerals, nutrients and minor elements. This information will establish a baseline of information for tracking and assessing long-term water quality trends during future transfer years.

[1] Specific conductance differs from electrical conductivity in that it is measured at a specific temperature.