## North Yuba Sub-Area (Well Number 17N/03E-03D01M):

The figure below is a hydrograph for well 17N/03E-03D01M, located in the western portion of the North Yuba Sub-area. The area surrounding the well is characterized by rural, agricultural land use supported by the application of both surface and groundwater. The well is an active irrigation well drawing water from the upper and middle portions of the aquifer system, with a groundwater level measurement record dating back to the late 1940s. The groundwater level in this well was monitored on a semi-annual basis until 1991, on a monthly basis from the 1991 to approximately 1995, and is currently being measured four times per-year, March, July, August and October.

This figure shows that the seasonal fluctuation in groundwater levels is about 5 to 10 feet during years of normal precipitation and 10 to 15 feet during years of drought. Long-term comparison of spring-to-spring groundwater levels show about a 10-foot decline in groundwater levels associated with 1976-77 and 1986-94 droughts, followed by recovery to pre-drought levels. Overall comparison of spring-to-spring groundwater levels indicates that the upper to middle aquifer system in this area has changed little since the1940s.





There is a noticeable downward trend in the spring groundwater levels since 1999. The annual rate of decline is about two feet per-year. Groundwater levels are currently near those recorded during the drought of the early 1990's. The decline is probably climate related and not the result of over utilization of the groundwater resource. The spring 2003 groundwater level in this well was slightly higher than the spring 2002 level. This was probably the result of increased recharge that occurred as a result of the slight increase in precipitation that occurred during the 2003 water year over the previous water

year. The one noticeably low groundwater level that occurred during the summer of 2003 was a questionable measurement and probably represents non-static conditions. The unusually high spring 1998 groundwater level is an indicator that when precipitation patterns return to a more normal trend that groundwater levels should recover. The winter of 1997-98 was a very wet water year type. An examination of the overall record reveals that long-term depletion of groundwater in storage is probably not occurring at this time.