

**2.3.7.1. Groundwater Response to Land Retirement**

Calendar year 2002 was the baseline year for monitoring groundwater levels and groundwater quality at the Atwell Island site. Groundwater levels measured in 20 wells confirm the presence of shallow, perched water table conditions at the Atwell Island site. Groundwater levels observed during the baseline year of monitoring (2002) in the shallow groundwater system range from 4.3 to 14.8 feet below land surface. In general, the water table is highest (nearest the land surface) in the northwest corner of the site and becomes deeper in the southeast portion of the site. These observations are consistent with those of Beard et al. (1994) and Reclamation (1982).

A declining shallow water table in response to land retirement has been observed on parts of the site where irrigation has ceased or been greatly reduced (Figure 2-38). Pre-project water level data reported by the USGS (Beard et al. 1994) show seasonal high groundwater levels around 5 feet below land surface. Post-project, seasonal high water levels measured in well 5B3 during 2002 have dropped to a depth ranging from approximately 7 to 8 feet below land surface (a decline of 2-3 feet). Groundwater level monitoring will continue at the site to evaluate shallow water table response to land retirement.

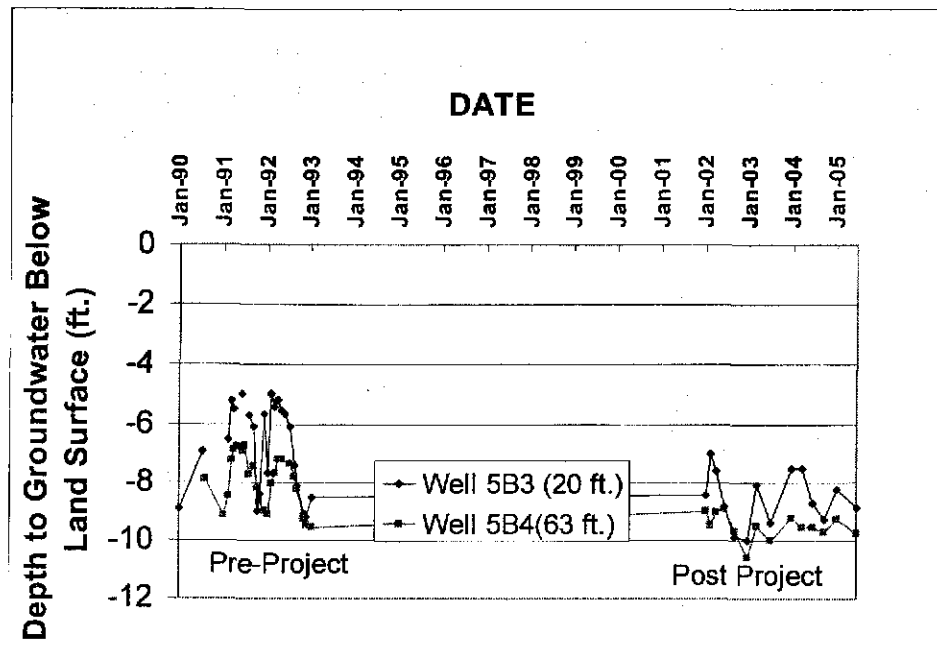


Figure 2-38. Hydrographs of groundwater levels observed in Wells 5B3 and 5B4 showing pre-project and post-project groundwater levels.

**2.3.7.2. Groundwater Salinity**

Baseline electrical conductivity data for the groundwater samples collected during the first year of monitoring are presented in Table 2-20. The shallow groundwater