

Figure 19: Contours of Mean Dissolved O₂ Concentrations Between 9/06/01 to 4/06/02

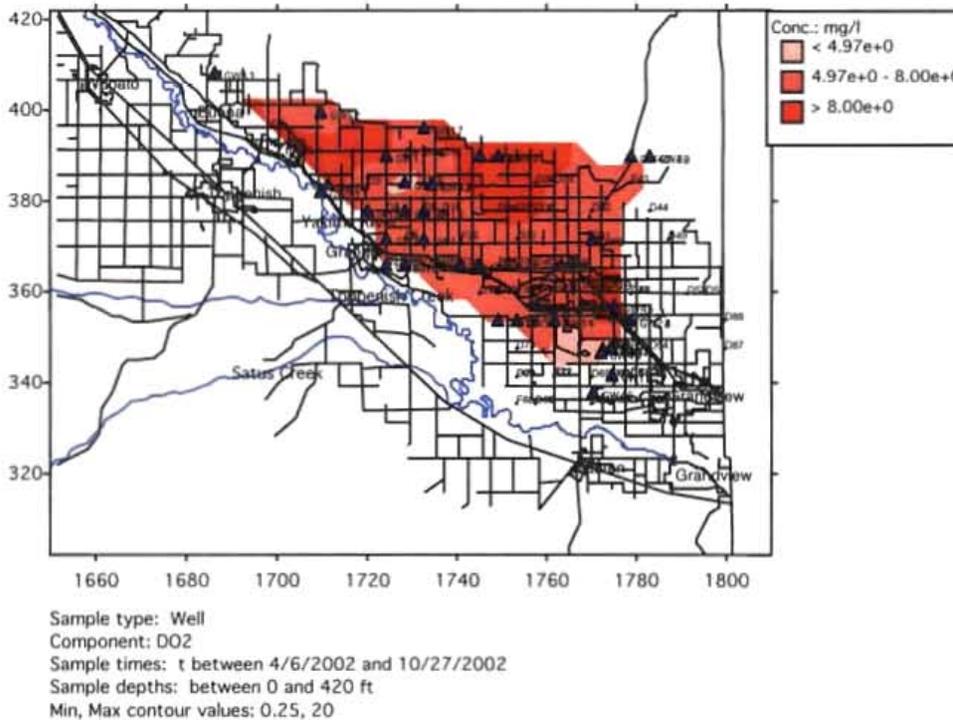


Figure 20: Contours of Mean Dissolved O₂ Concentrations Between 4/06/02 to 10/27/02

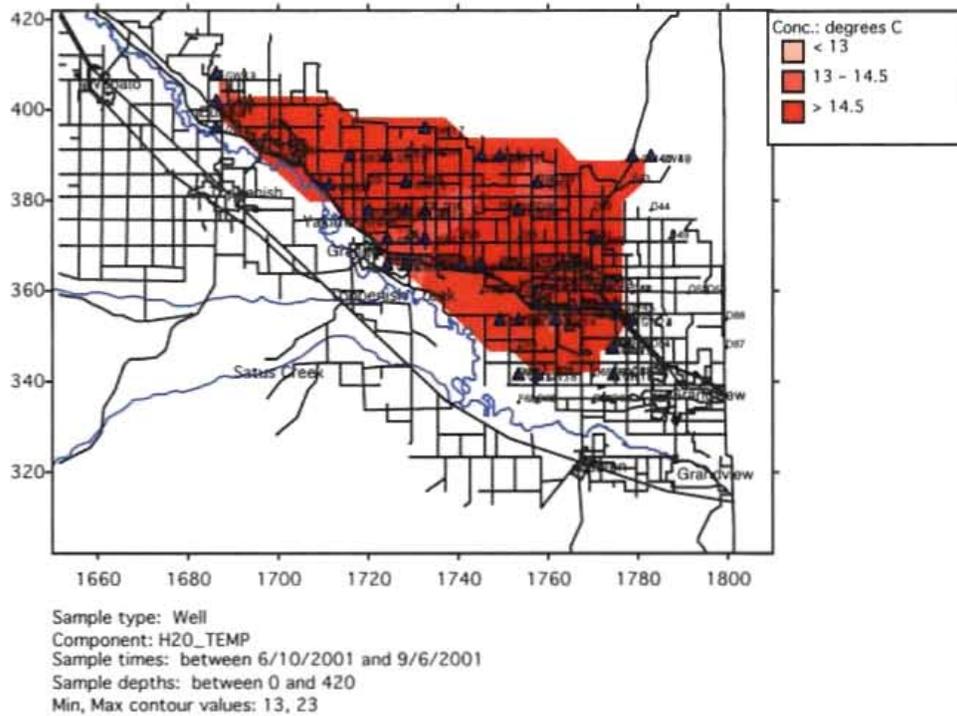


Figure 21: Contours of Maximum Temperature Between 6/10/01 to 9/06/2001

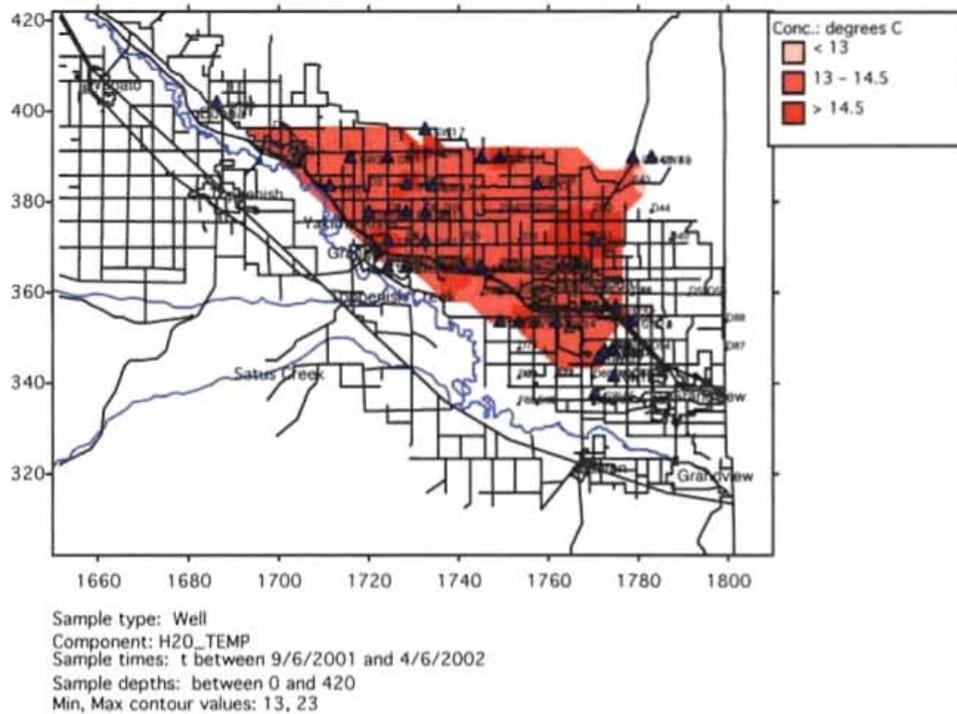


Figure 22: Contours of Maximum Temperature Between 9/06/01 to 4/06/2002

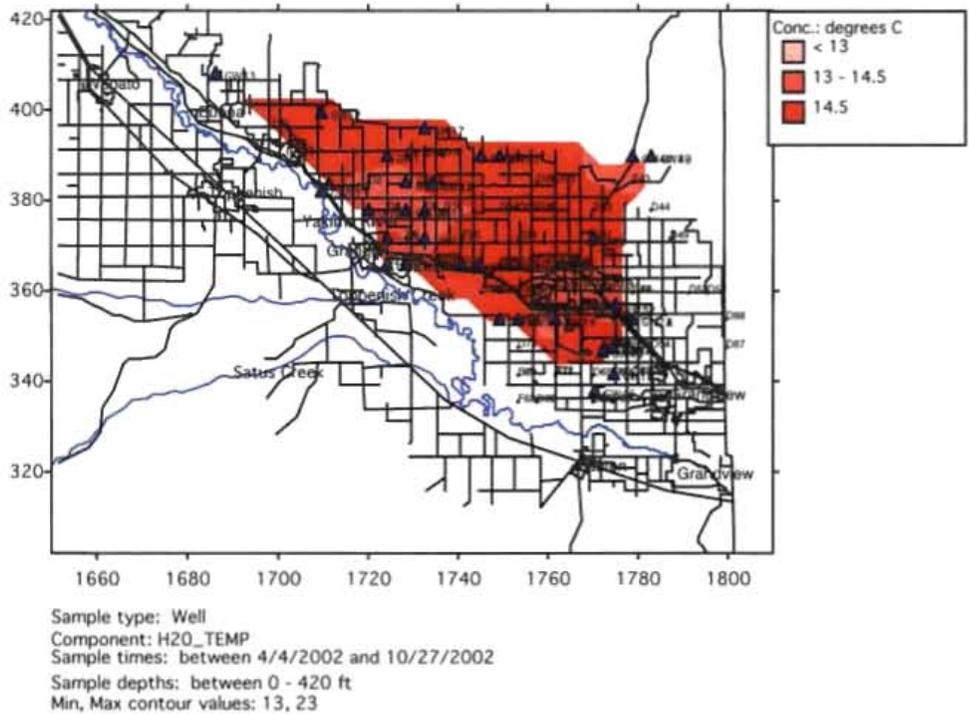


Figure 23: Contours of Maximum Temperature Between 4/06/02 to 10/27/2002

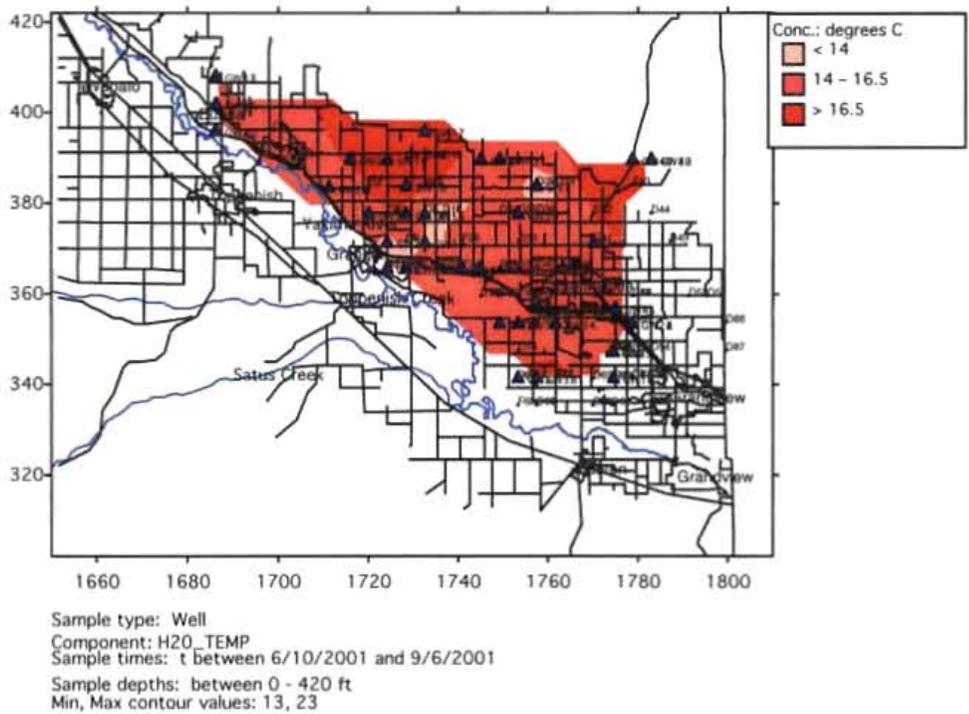


Figure 24: Contours of Mean Temperature Between 6/10/01 to 9/06/2001

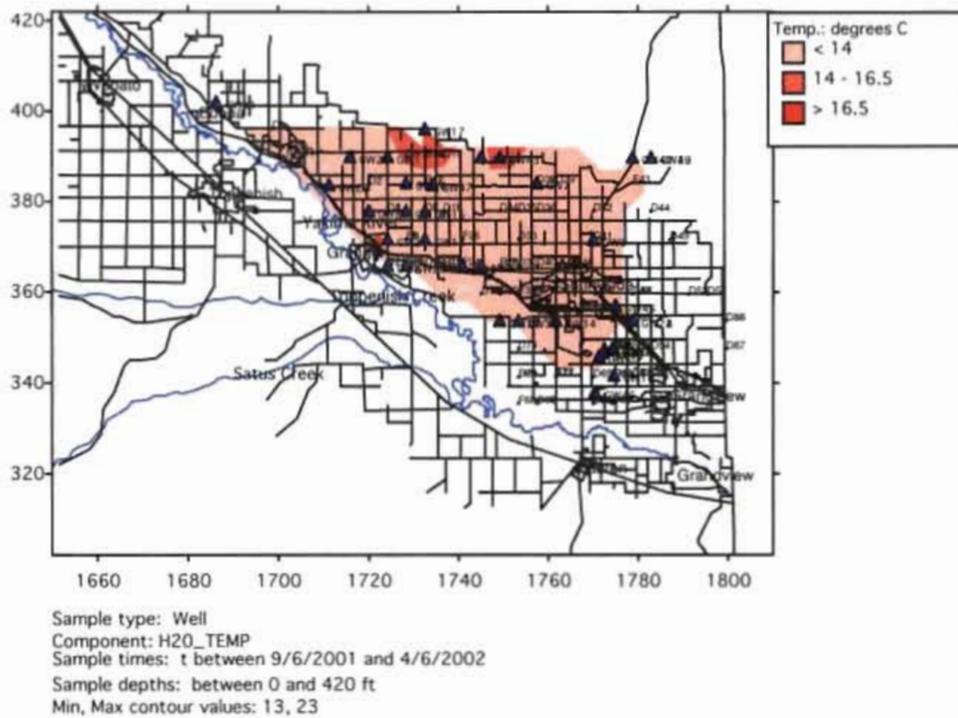


Figure 25: Contours of Mean Temperature Between 9/06/01 to 4/06/2002

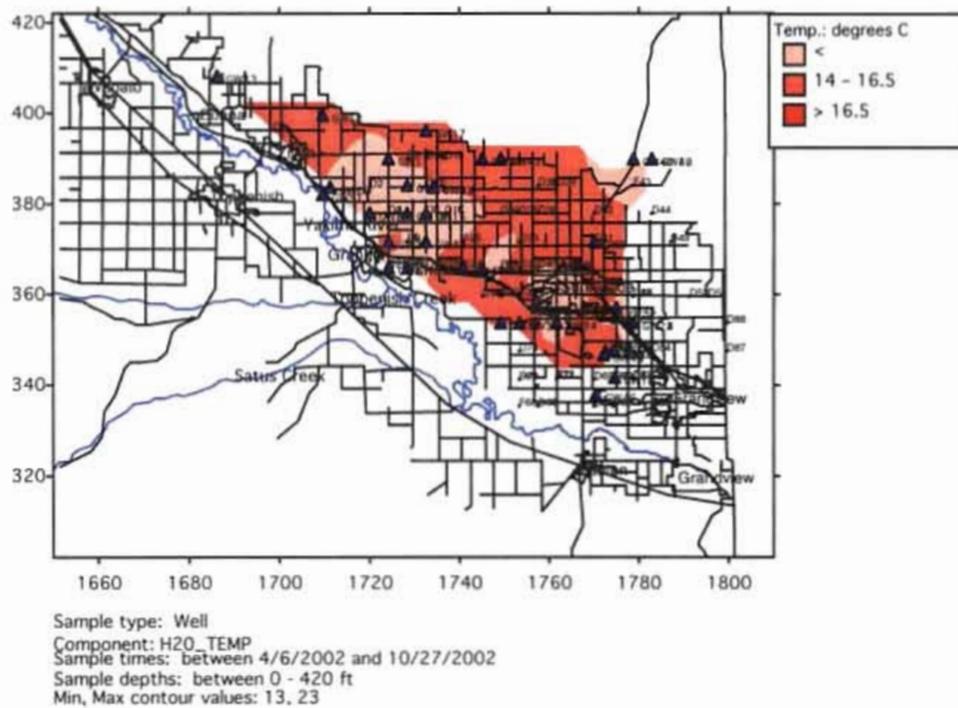


Figure 26: Contours of Mean Temperature Between 4/06/02 to 10/27/2002

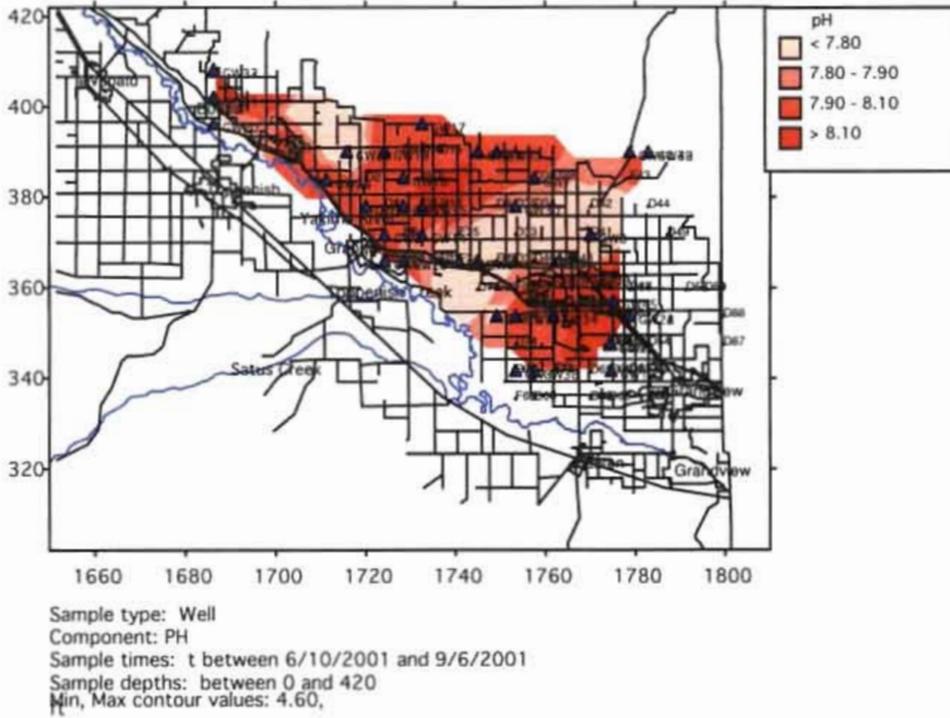


Figure 27: Contours of Maximum pH Between 6/10/01 to 9/06/2001

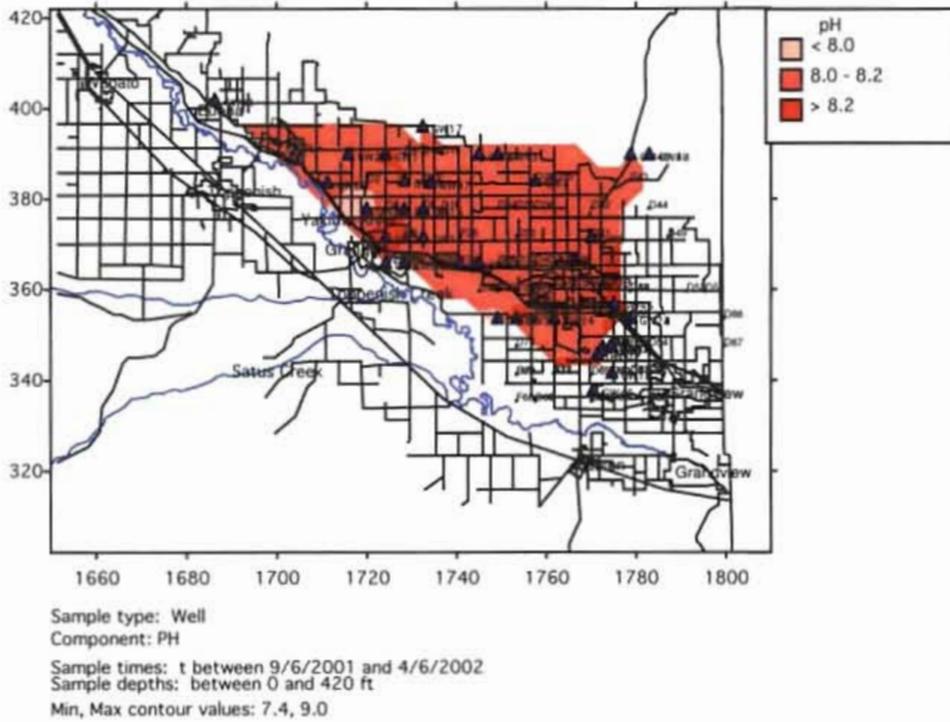


Figure 28: Contours of Maximum pH Between 9/06/01 to 4/06/2002

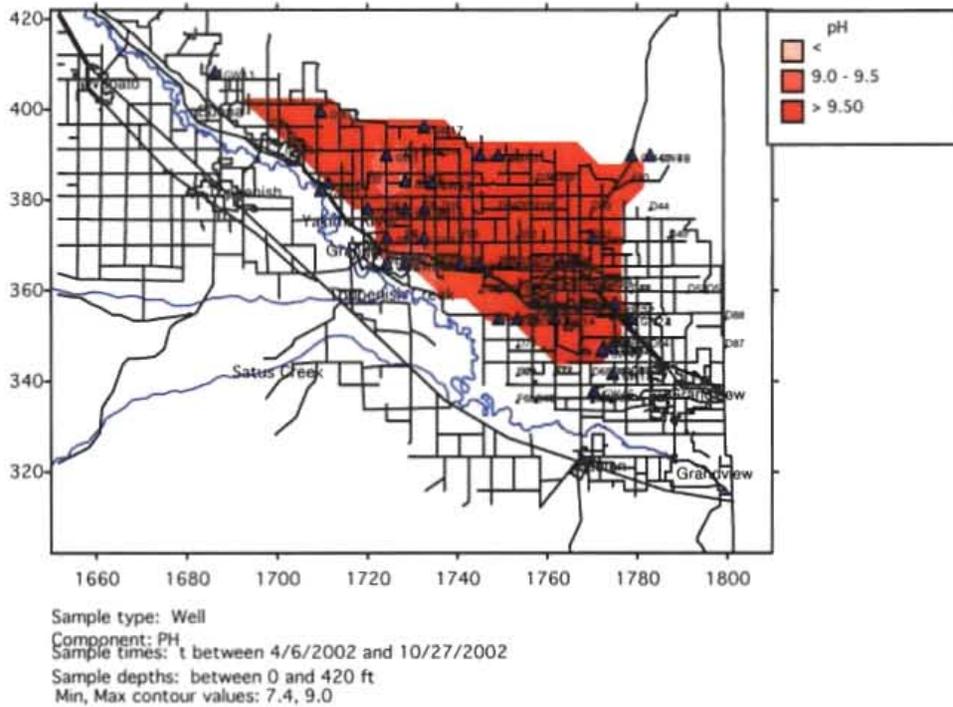


Figure 29: Contours of Maximum pH Between 4/06/02 to 10/27/2002

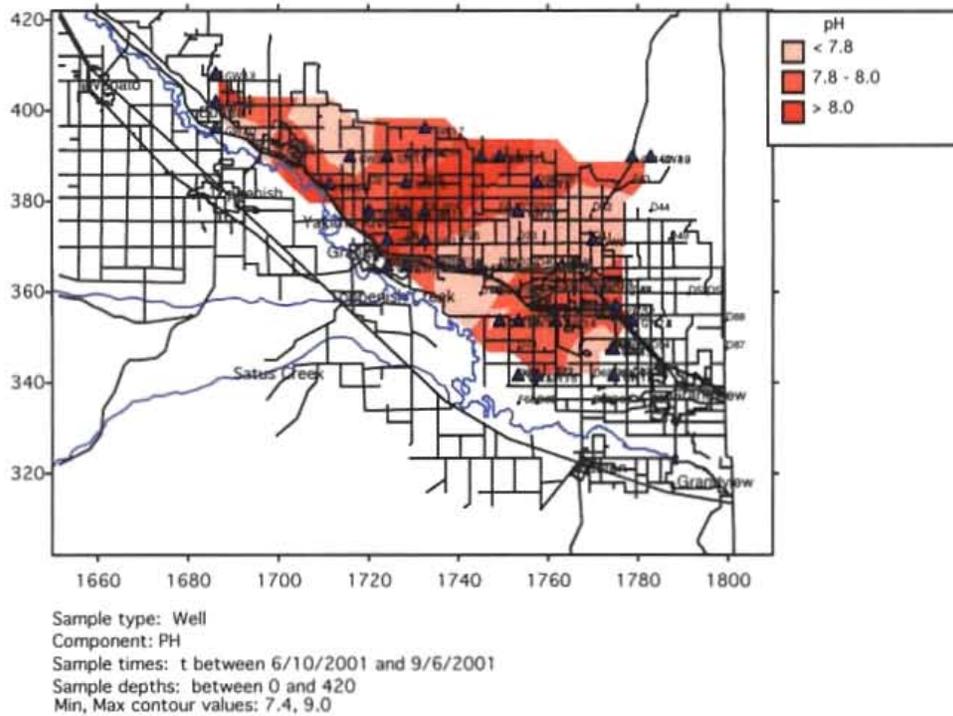


Figure 30: Contours of Mean pH Between 6/10/01 to 9/06/2001

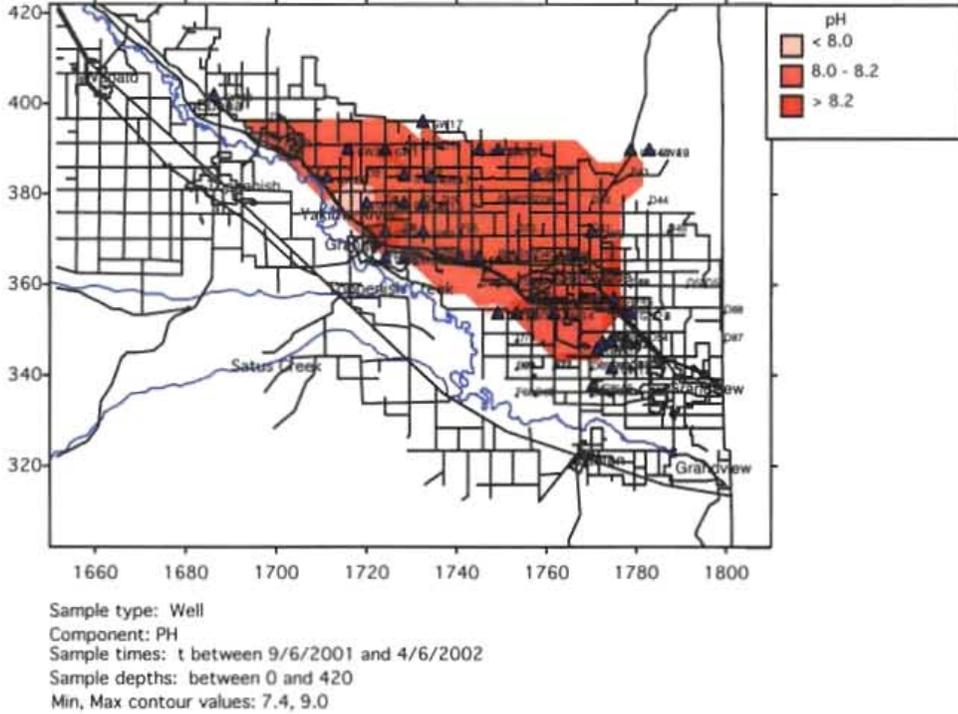


Figure 31: Contours of Mean pH Between 9/06/01 to 4/04/2002

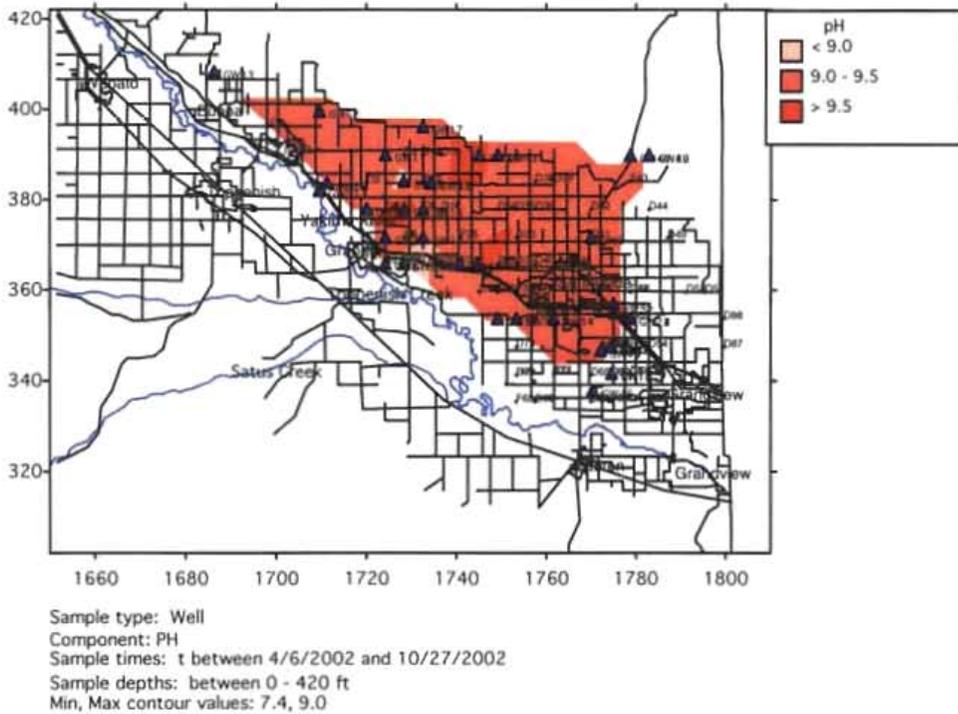


Figure 32: Contours of Mean pH Between 4/06/02 to 10/27/02

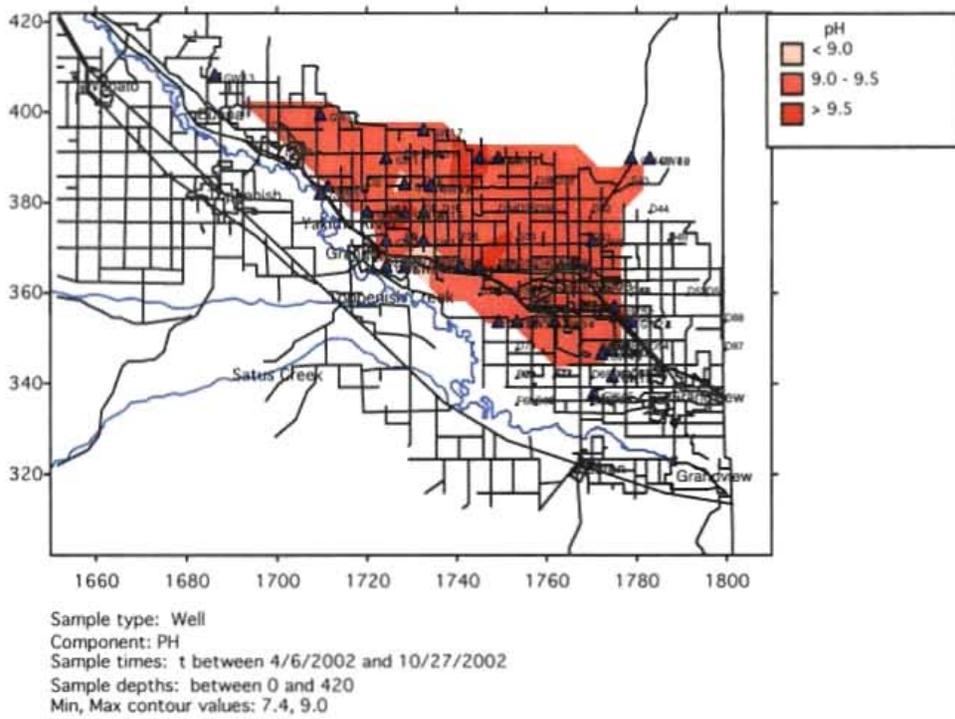


Figure 32: Contours of Mean pH Between 4/06/02 to 10/27/02

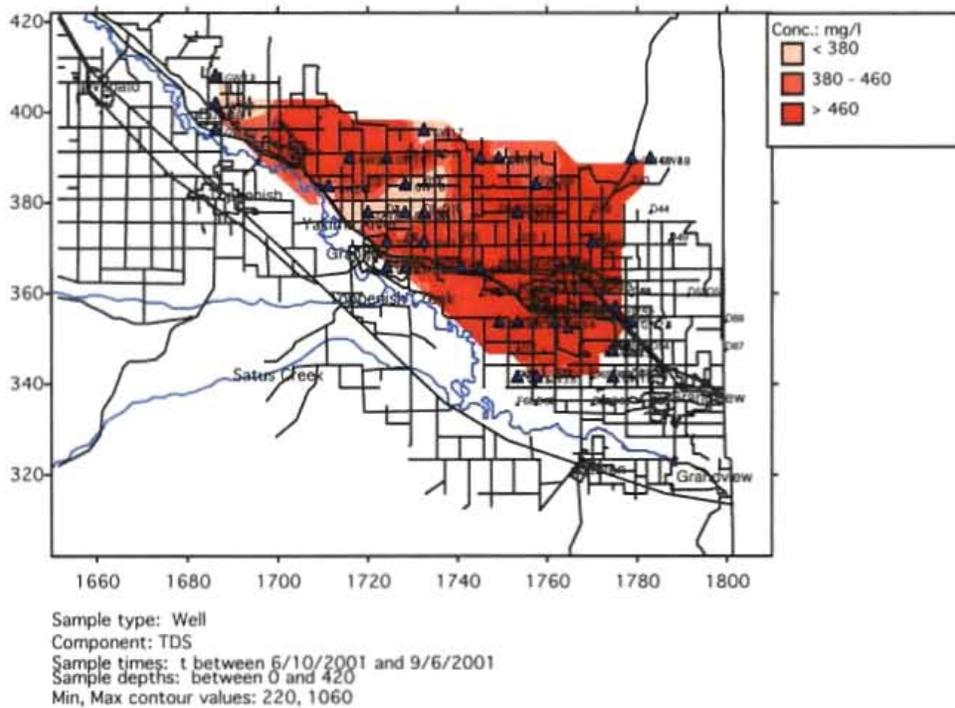


Figure 33: Contours of Maximum TDS Concentrations Between 6/10/01 to 9/06/01

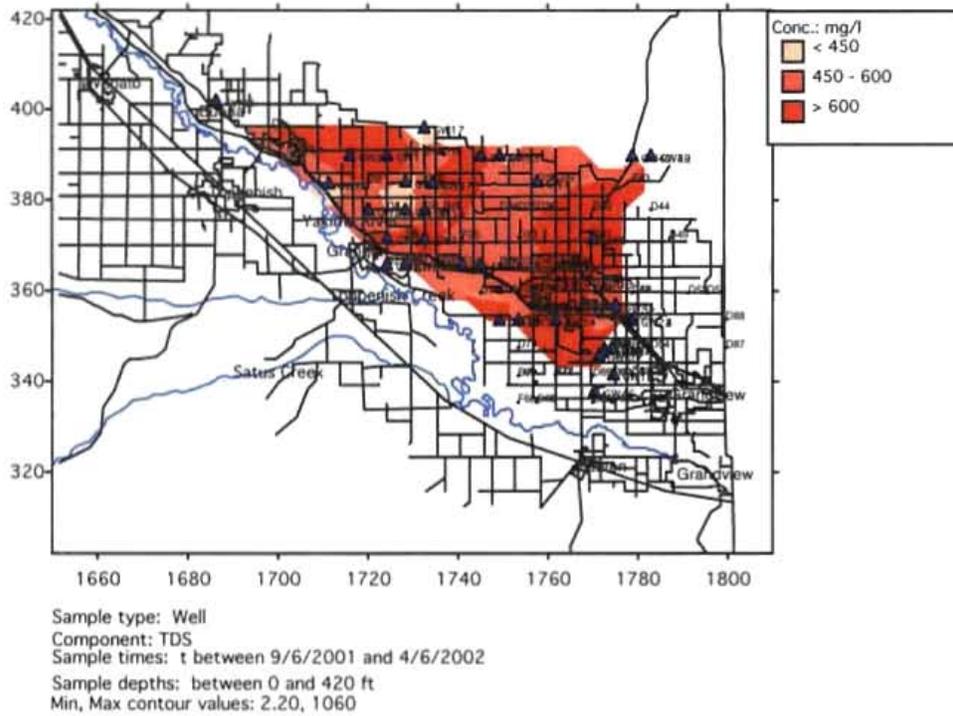


Figure 34: Contours of Maximum TDS Concentrations Between 9/06/01 to 4/06/02

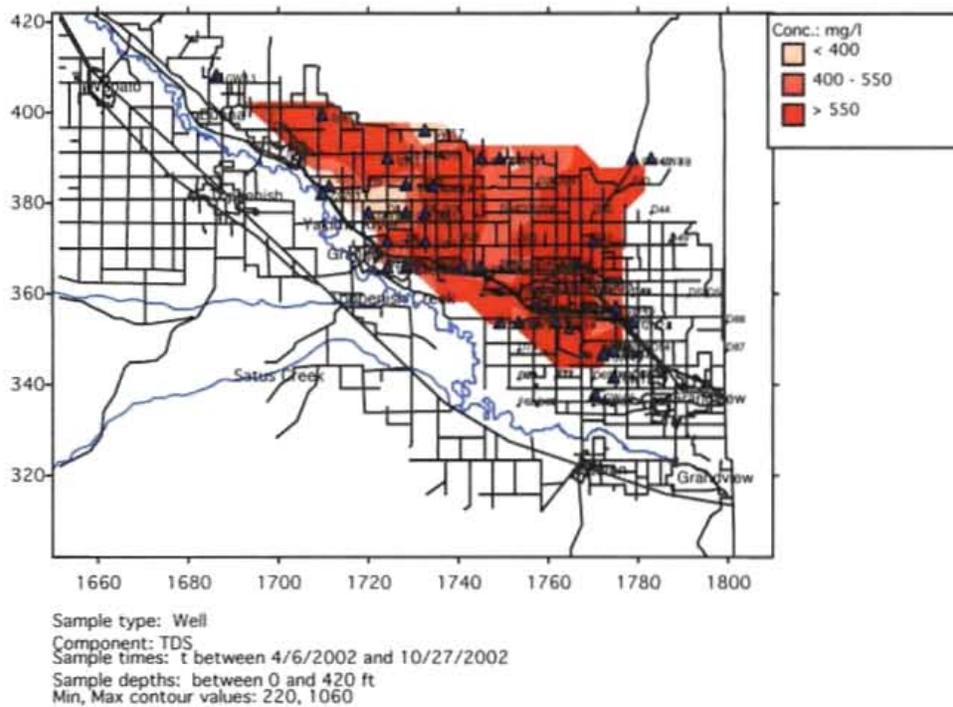


Figure 35: Contours of Maximum TDS Concentrations Between 4/06/02 to 10/27/02

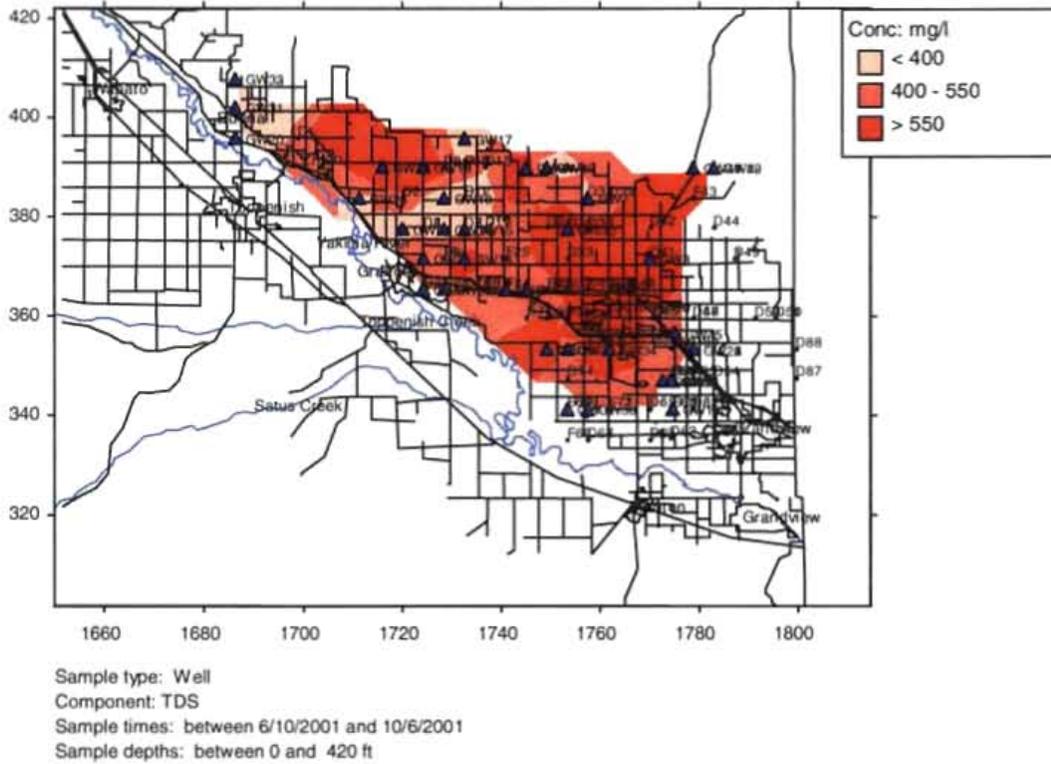


Figure 36: Contours of Mean TDS Concentrations Between 6/10/01 to 9/06/01

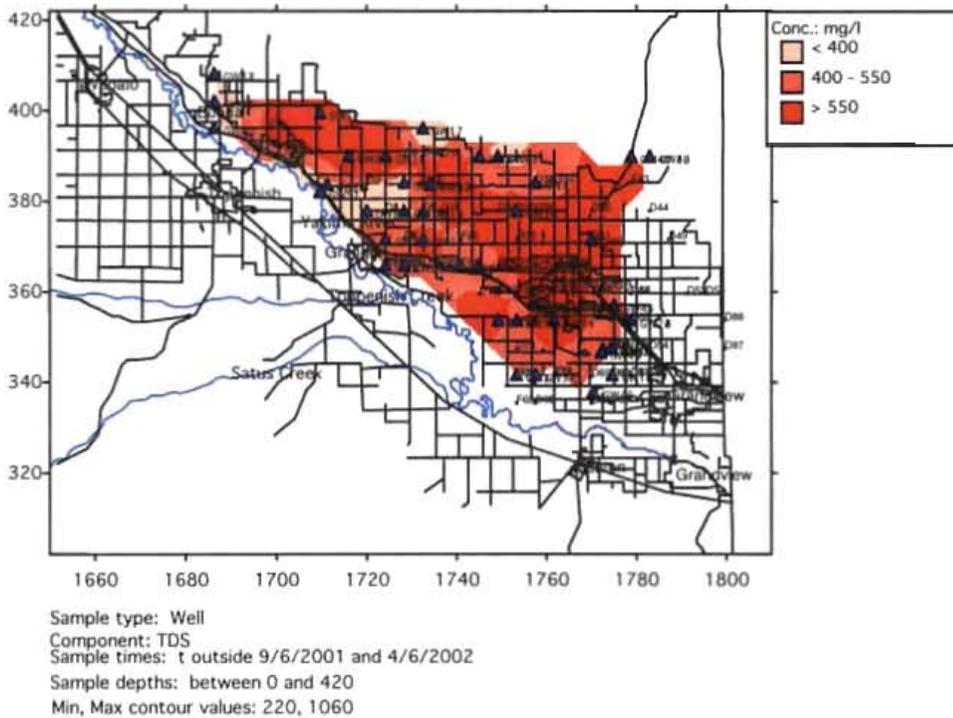


Figure 37: Contours of Mean TDS Concentrations Between 9/06/01 to 4/06/02

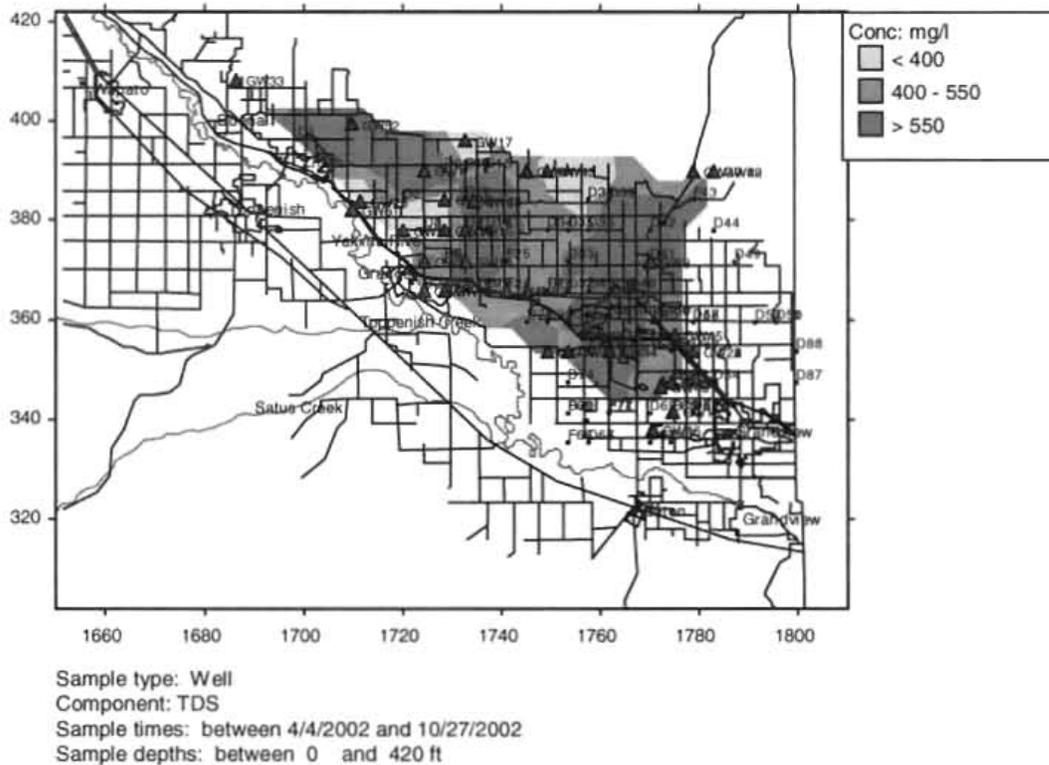


Figure 38: Contours of Mean TDS Concentrations Between 4/06/2002 to 10/27/02

Figure 39 through 53 show the cumulative distributions of the frequencies of occurrence of $\text{NO}_3\text{-NO}_2\text{-N}$, TDS, DO concentrations, pH, and water temperature for the periods approximately corresponding to the two consecutive irrigation periods, June 10, 2001 to September 6, 2001 and April 6, 2002 to October 9, 2002 and the intervening period from September 6, 2001 to April 6, 2002 in which irrigation water was not used. The calculated means, sample variances, and number of samples for $\text{NO}_3\text{-NO}_2\text{-N}$, TDS, DO concentrations, pH, and water temperature are shown in Table 1. The results of the z-test comparing means for each parameter for the three time periods are shown in Table 2.

The plots of the cumulative frequencies of occurrence, overlap of 95% confidence intervals or lack of overlap, and the results of the z tests consistently indicate the TDS, and DO concentrations did not change significantly with seasons. These same analyses indicate that means of pH and water temperature changed for each of the time periods of the study. Mean $\text{NO}_3\text{-NO}_2$ nitrogen concentrations changed from the non-irrigation season to the 2nd irrigation season. Mean $\text{NO}_3\text{-NO}_2$ nitrogen concentrations did not change comparing the 1st season to the 2nd irrigation season. However, there was an increase of mean $\text{NO}_3\text{-NO}_2$ nitrogen concentration between the 1st irrigation period and the second irrigation period.

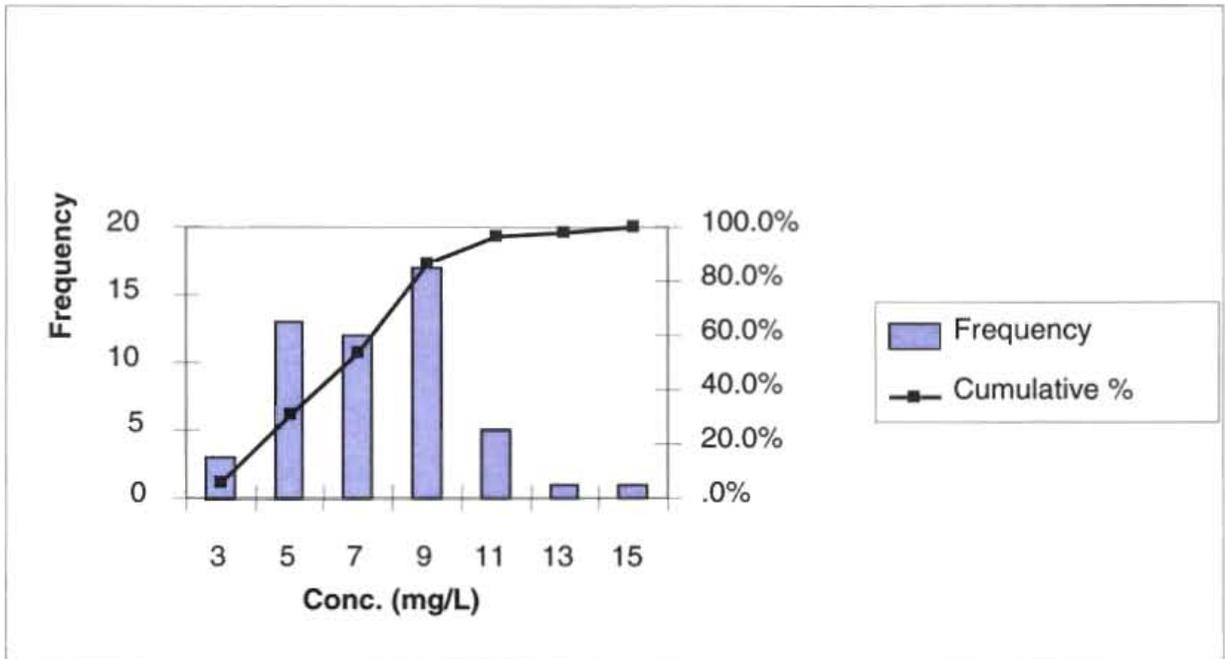


Figure 39: Histogram of Dissolved Oxygen for Period Between 6/10/01 and 9/6/01

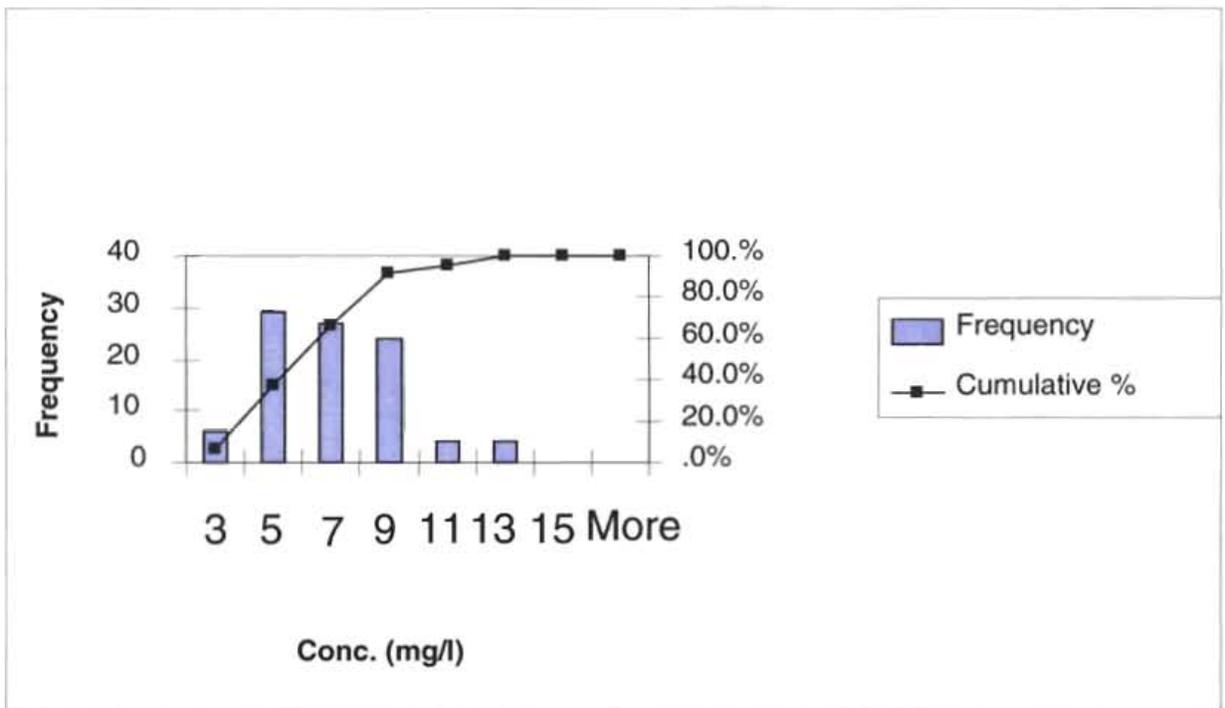


Figure 40: Histogram of Dissolved Oxygen for Period Between 9/06/01 and 4/06/02

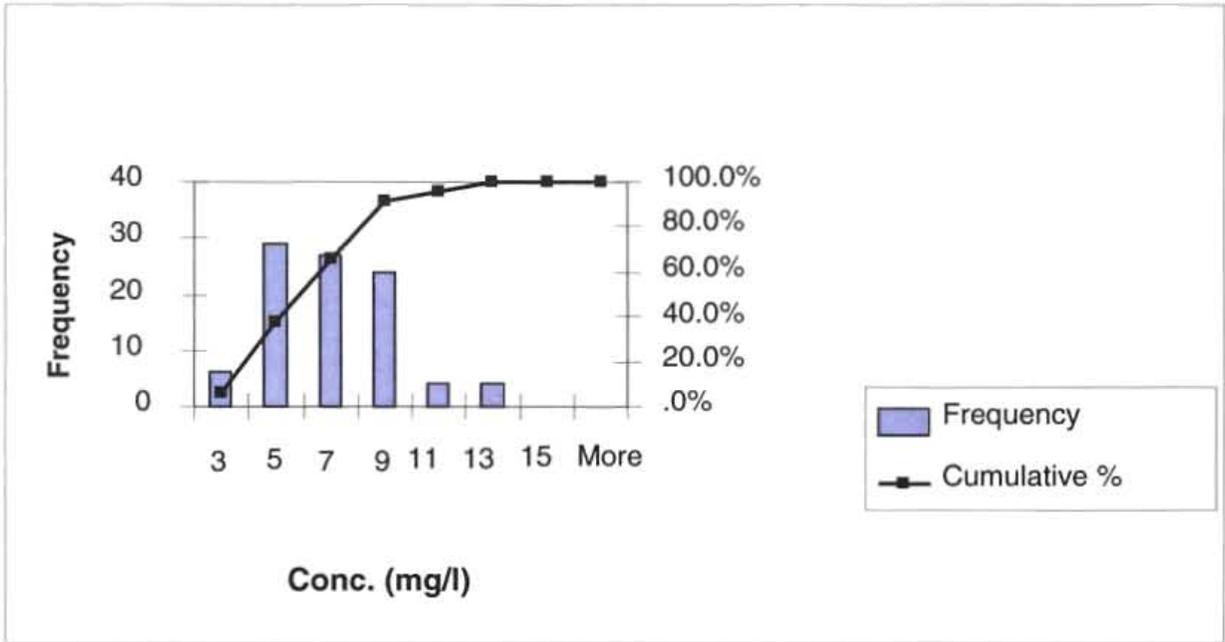


Figure 41: Histogram of Dissolved Oxygen for Period Between 4/06/02 and 10/10/02

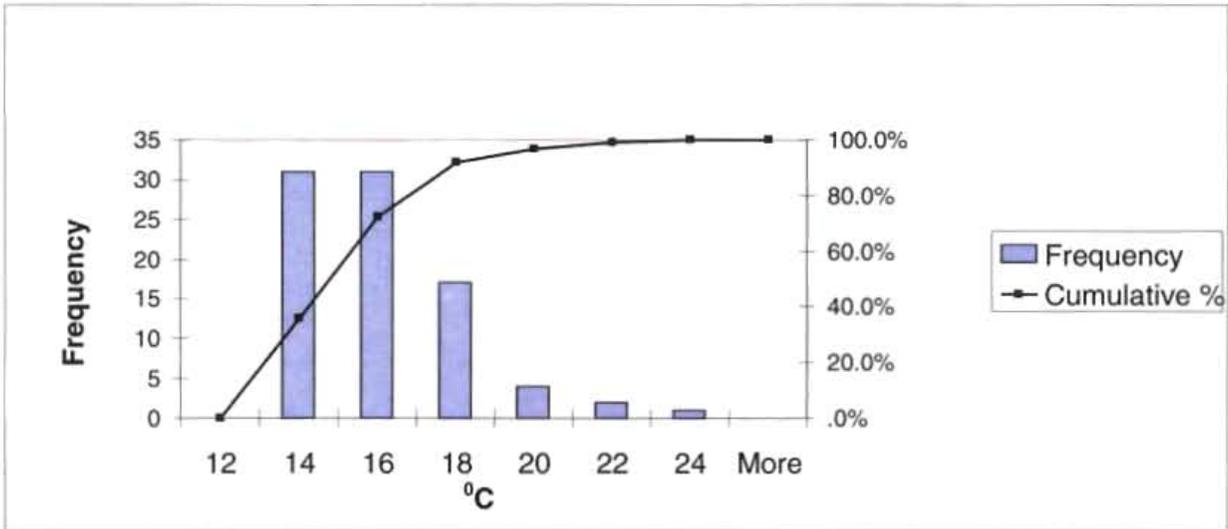


Figure 42: Histogram of Groundwater Temperature for Period Between 6/29/01 and 9/06/01

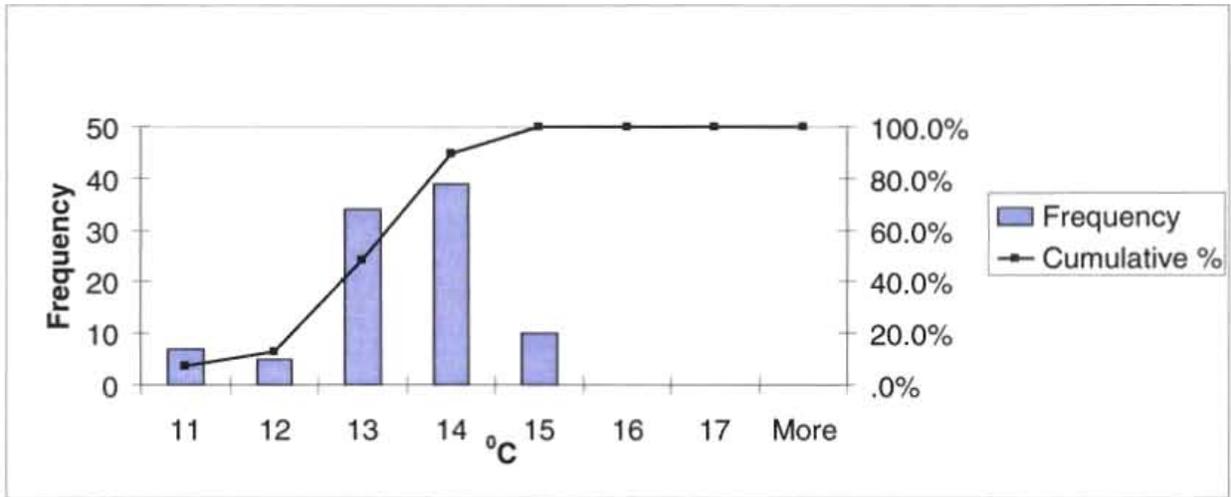


Figure 43: Histogram of Groundwater Temperature for Period Between 9/06/01 and 4/06/02

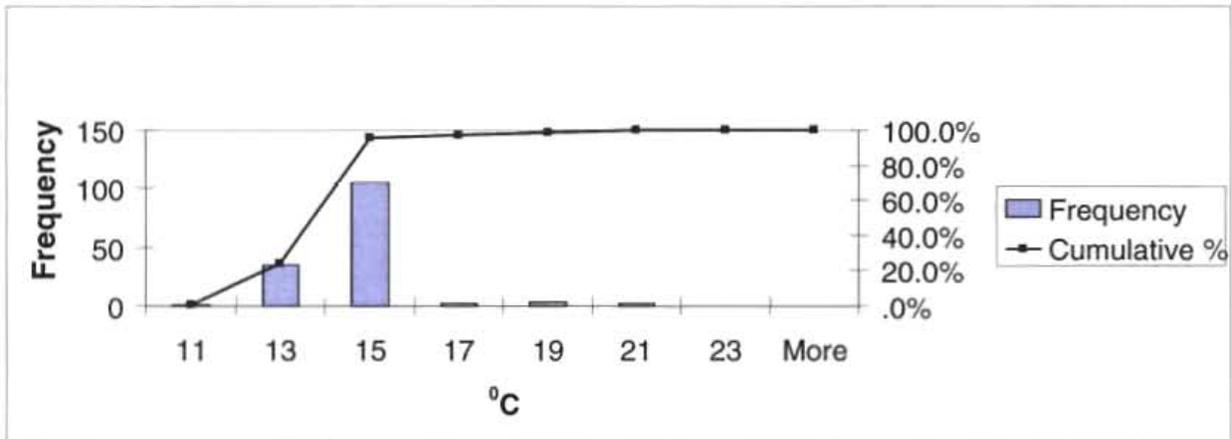


Figure 44: Histogram of Groundwater Temperature for Period Between 4/06/02 and 10/09/02

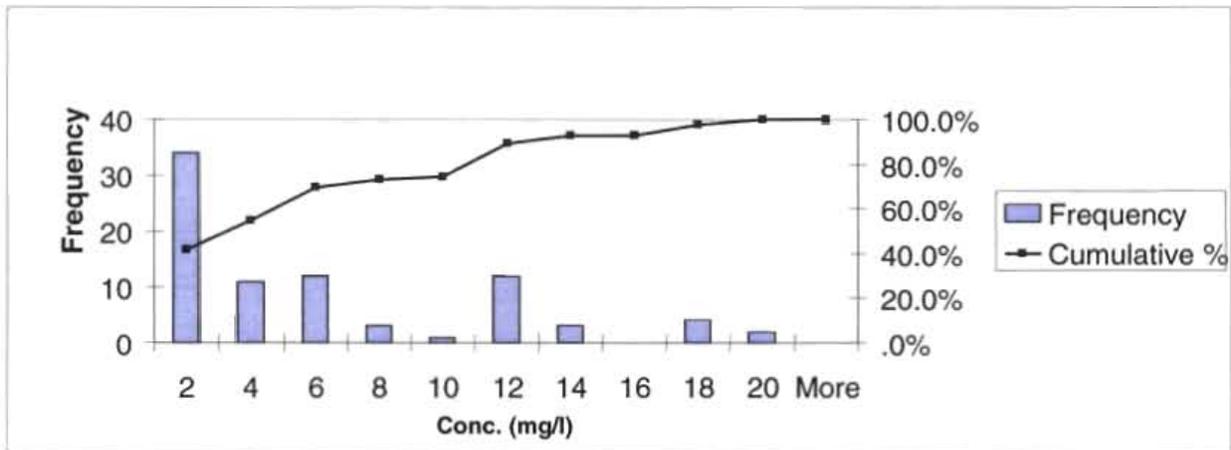


Figure 45: Histogram of NO₂- NO₃ Concentrations for Period Between 6/29/01 and 9/06/01

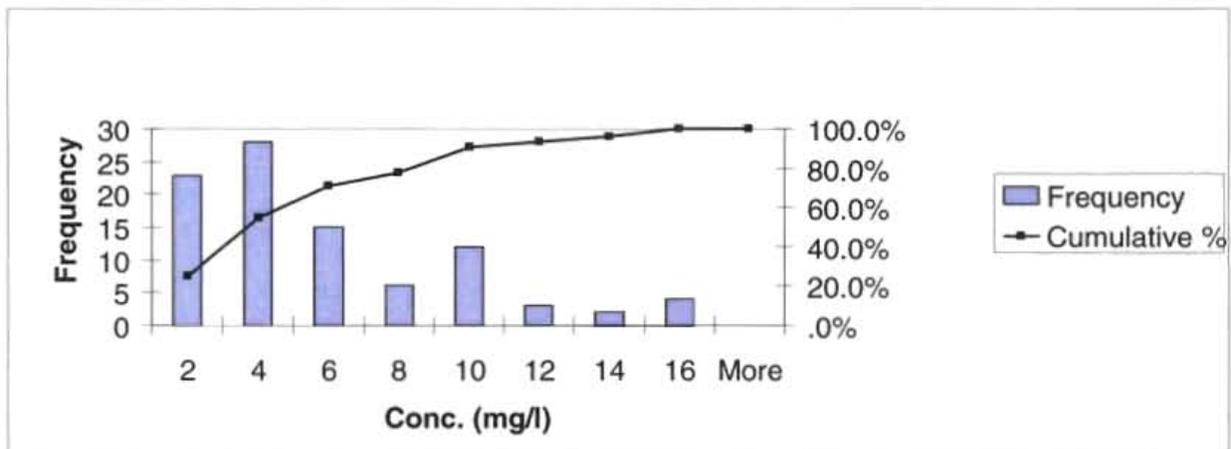


Figure 46: Histogram of NO₂-O₃ Concentrations for Period Between 9/06/01 and 4/06/02

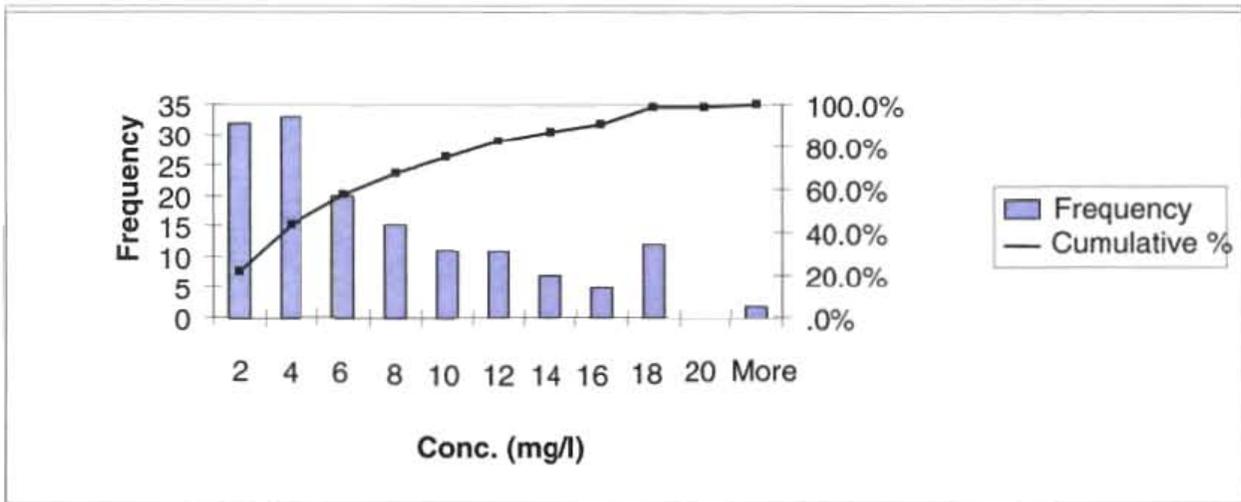


Figure 47: Histogram of NO₂-O₃ Concentrations for Period Between 4/06/02 and 10/09/02

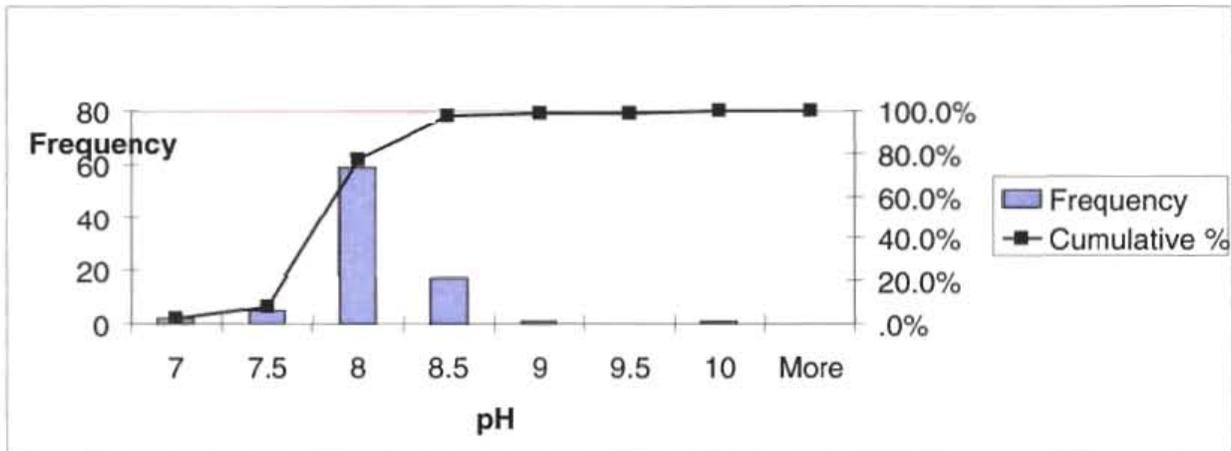


Figure 48: Histogram of Groundwater pH for Period Between 6/29/01 and 9/06/01

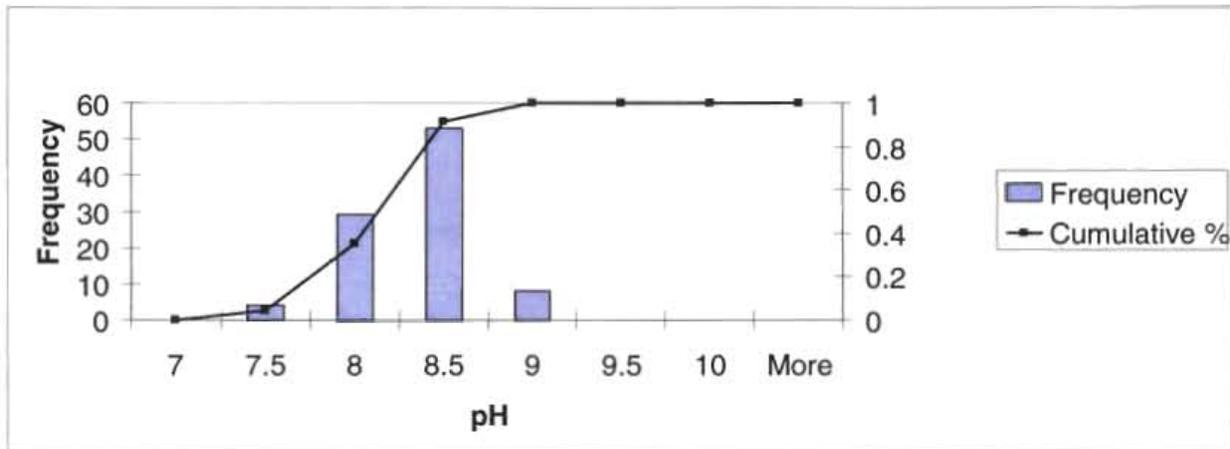


Figure 49: Histogram of Groundwater pH for Period Between 6/29/01 and 9/06/01

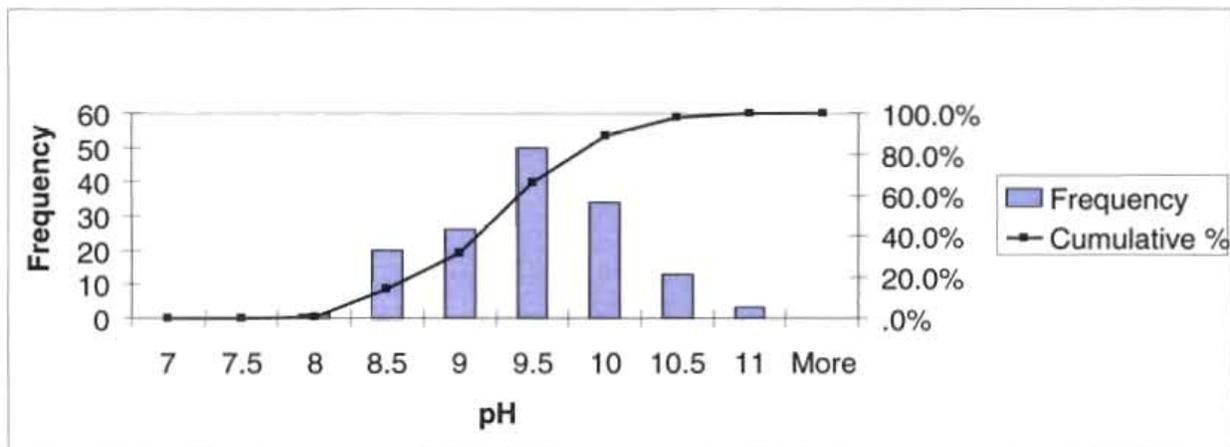


Figure 50: Histogram of Groundwater pH for Period Between 4/06/02 and 10/09/02