

Figure 36. Change in Water Levels, 1956-1976

used by the private laboratories and Texas A&M were not investigated. The chloride analyses by Texas Railroad Commission personnel were made using techniques that are not as precise as the techniques used for those samples analyzed by laboratories of the Texas Department of Health or the U.S. Geological Survey. The Railroad Commission analyses were made normally to detect large differences in chloride concentration or particularly high values. They are satisfactory for these purposes, but not for detailed comparisons with other chloride analyses. From a review of the methods used by Railroad Commission personnel and from studying the analyses, it appears that the results are accurate generally within approximately 50 milligrams per liter (mg/l) for chloride concentrations up to approximately 1,000 mg/l.

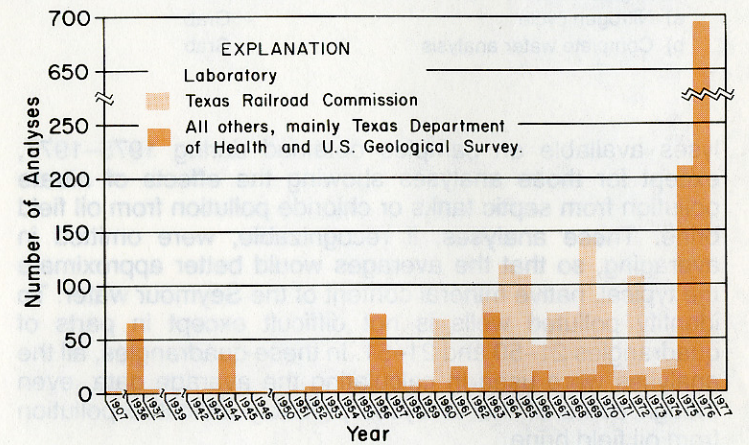


Figure 37. Available Chemical Analyses

### Chemical Content of Water

The water in the Seymour Formation is characterized by a wide variability in quality. Large differences in chemical quality occur in adjacent wells. Also, there is a large difference between those areas having the best quality and those having the worst quality. The variance in water quality is due to the wide range in geologic and hydrologic conditions in the Seymour.

The sources, significance, and representative values of selected chemical constituents and properties of Seymour water are summarized in Table 7. Tables 14, 15, and 16 give the results of all complete and partial analyses on wells and springs. A series of water quality maps (Figures 38, 39, 40, 43, 44, and 45) summarize the dissolved solids, chloride, sulfate, nitrate, fluoride, silica, bicarbonate, calcium, magnesium, and sodium content of water from wells tapping the Seymour. The maps are based on the analyses of samples collected during 1975-1977. The maps include averages of the data by small areas. The averages are calculated for individual 2½-minute quadrangles or for combinations of 2½-minute quadrangles. The averages include all the ana-