

Figure 3. Water-level changes in the Chicot equivalent aquifer system during 1969-91.

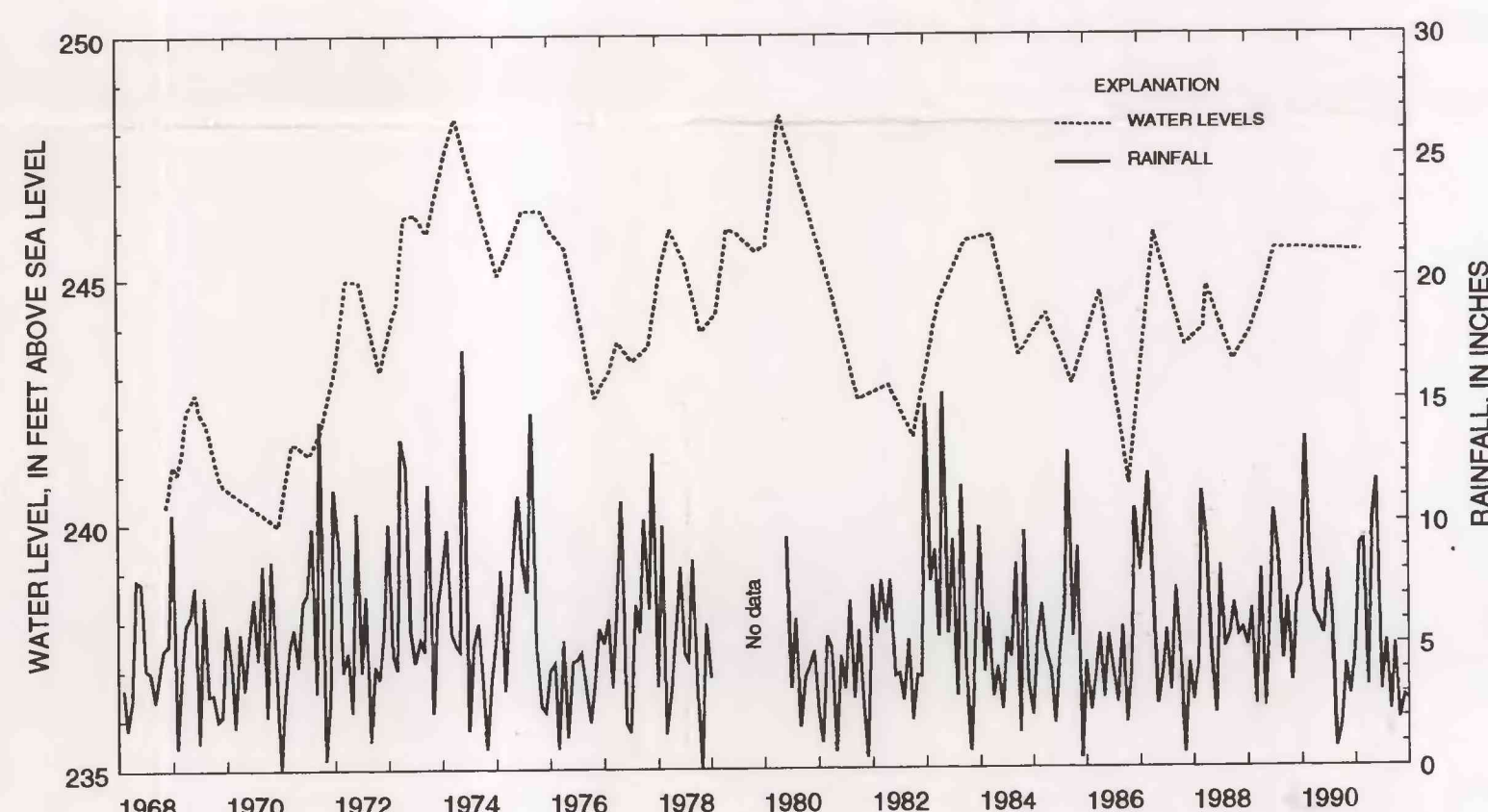


Figure 4. Water level in well Ta-362 and monthly rainfall totals near Kentwood, Tangipahoa Parish, Louisiana.

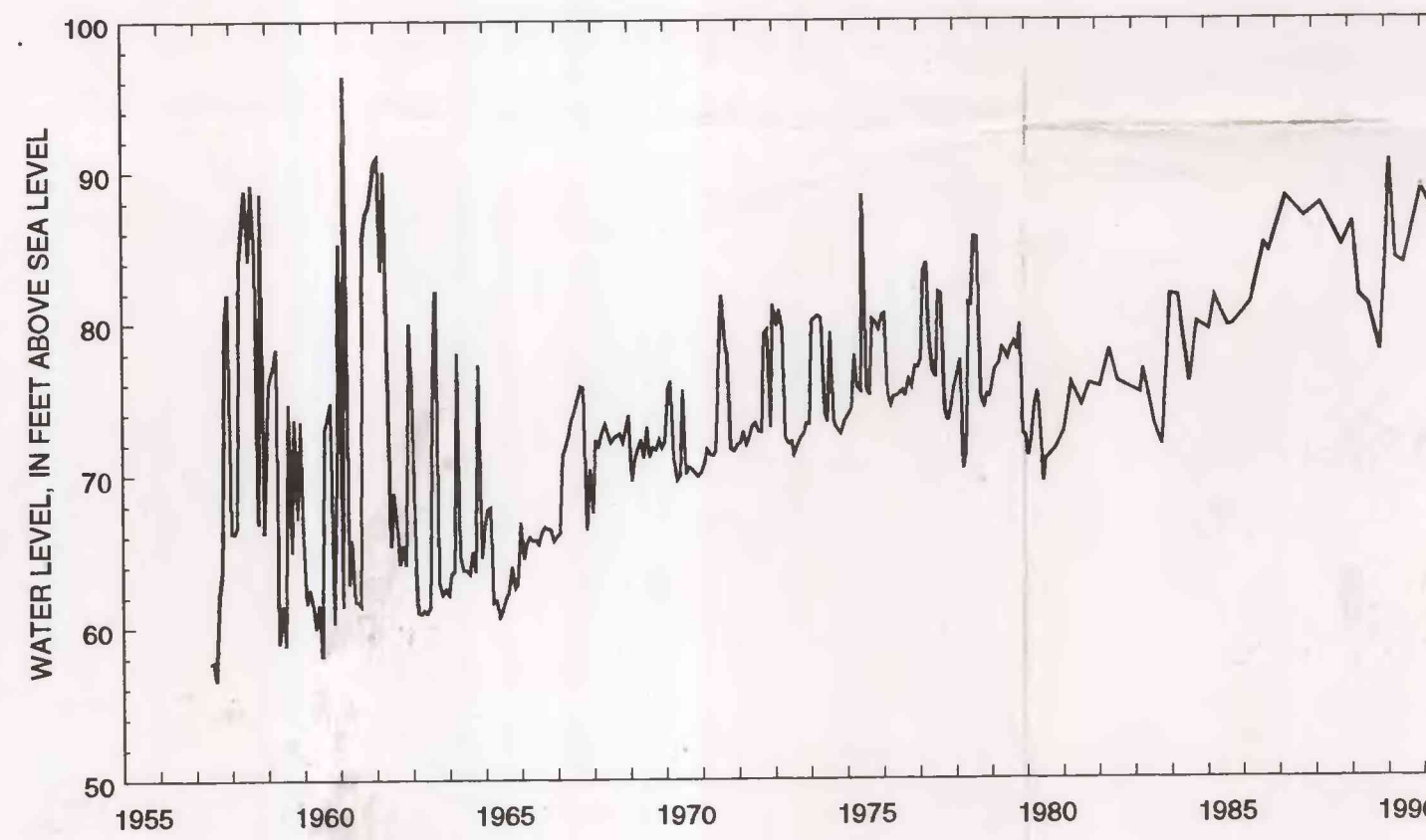


Figure 5. Water level in well Wa-13 at Bogalusa, Washington Parish, Louisiana.



WATER-LEVEL CHANGES

The general trend of water-level changes within the Chicot equivalent aquifer system in the Florida Parishes is shown in figures 3 to 5. The areal distribution of water-level changes during 1969-91 is shown in figure 3. Water-level trends in selected observation wells are illustrated by the hydrographs in figures 4 and 5. The water-level change map (fig. 3) was prepared by comparing the potentiometric surface maps and calculating the difference between water levels measured in 1969 and 1991. Lines of equal water-level change then were plotted. During 1969-91, water-level changes in the aquifer system ranged from a decline of 5 feet in southern Tangipahoa Parish and eastern Livingston Parish to a recovery of 16 feet at Bogalusa in Washington Parish (fig. 3). Water-level changes within the Chicot equivalent aquifer system are related primarily to long- and short-term changes in precipitation. The relation between rainfall and water levels in well Ta-362 near Kentwood, La., is shown in figure 4. The aquifer system has good hydraulic connection with streams in the study area, and water levels generally fluctuate 3 to 6 feet per year in wells near major streams, with lesser fluctuations near drainage basin divides (Nyman and Fayard, 1978, p. 18-19). As shown in the hydrograph of well Wa-13 (fig. 5), a slow recovery trend in the Bogalusa area has continued since the early 1960's. This trend is thought to be due primarily to the increased reliance on deeper aquifers for water supplies by industrial users in the area (Case, 1979, p. 10-11).

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
inch (in.)	25.4	millimeter
foot (ft)	0.3048	meter
foot per year (ft/yr)	0.3048	meter per year
million gallons per day (Mgal/d)	3,785	cubic meters per day

Sea level: In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

LOUISIANA GROUND-WATER MAP NO. 7:  
WATER-LEVEL CHANGES, 1969-91, OF THE CHICOT EQUIVALENT AQUIFER SYSTEM  
IN SOUTHEASTERN LOUISIANA

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