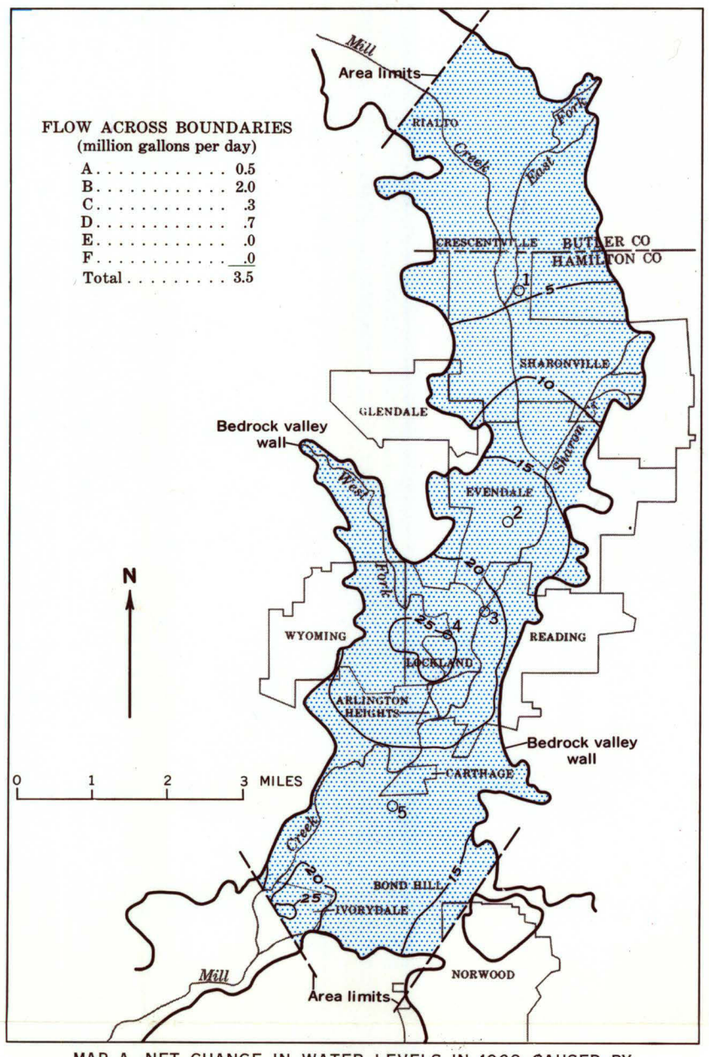
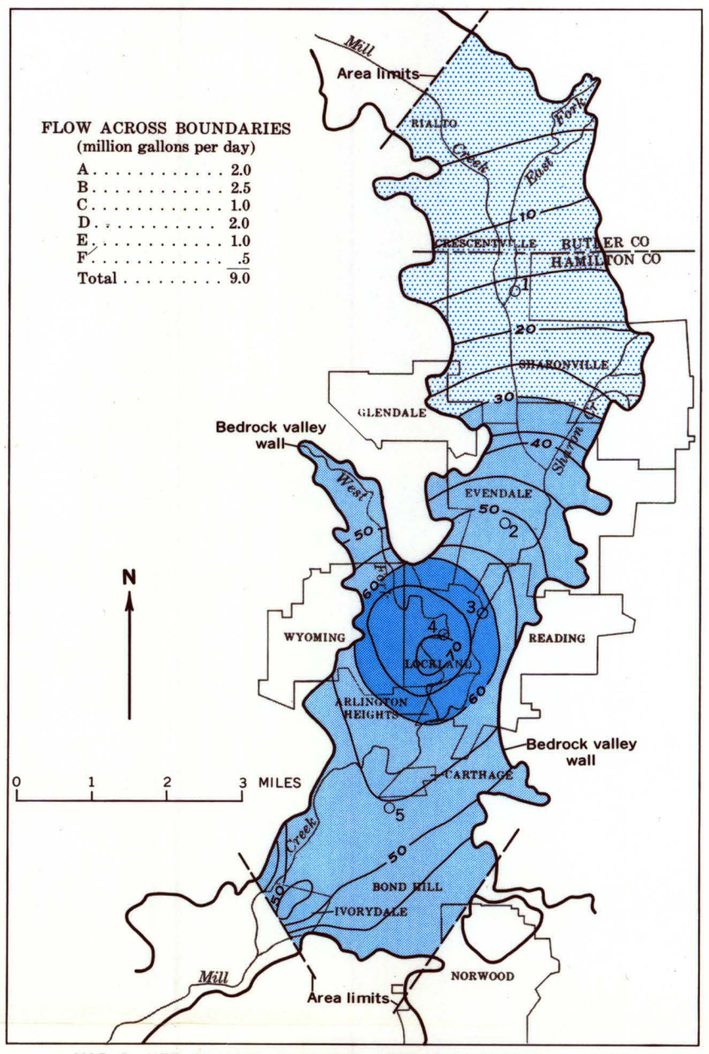
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER

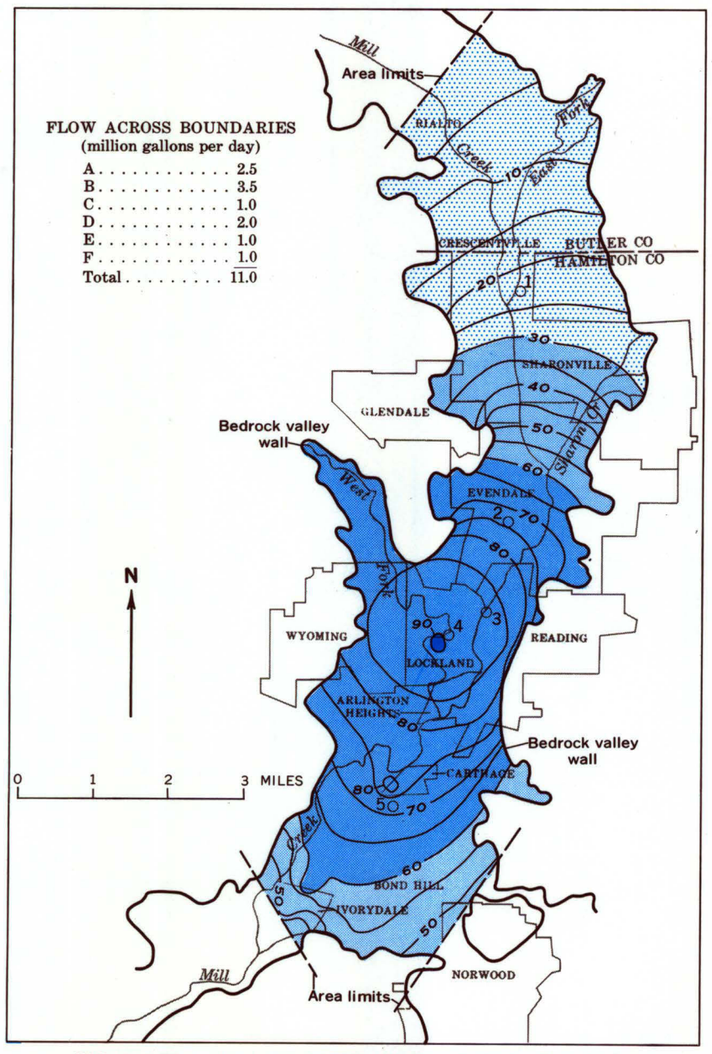
WATER-SUPPLY PAPER 1893
PLATE 2



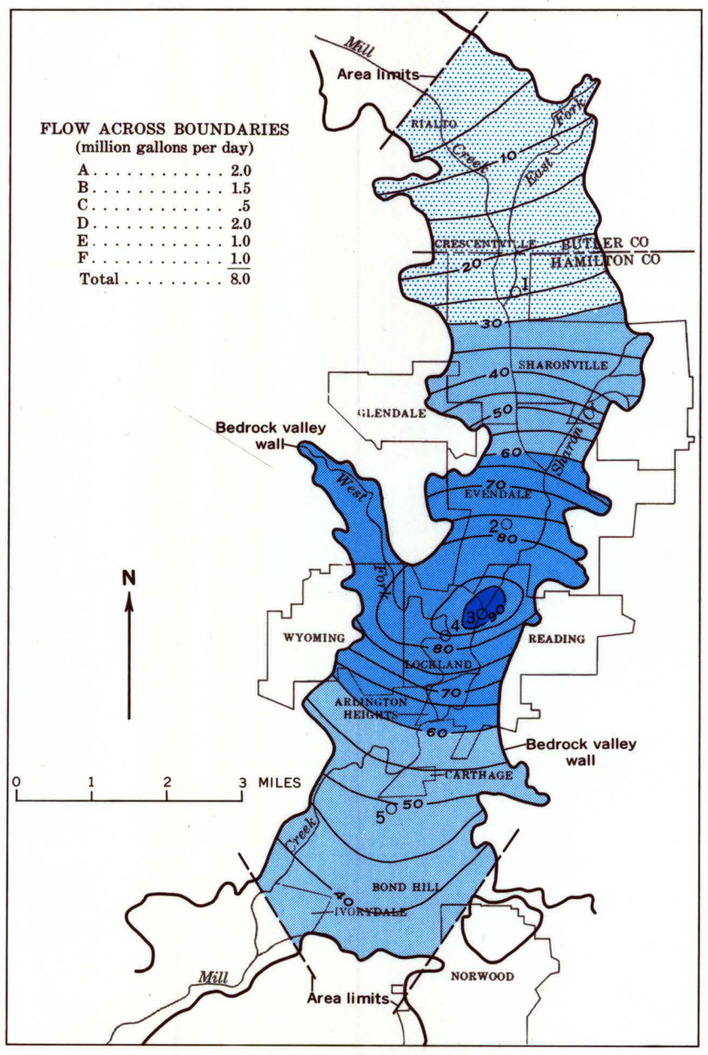
MAP A. NET CHANGE IN WATER LEVELS IN 1920 CAUSED BY PUMPING AT AN ESTIMATED AVERAGE RATE OF 1.5 MGD IN THE PERIOD 1890–99 AND 4.6 MGD IN THE PERIOD 1900–19



MAP B. NET CHANGE IN WATER LEVELS IN 1942 CAUSED BY PUMPING AT AN ESTIMATED AVERAGE RATE OF 9.92 MGD IN THE PERIOD 1920–41



MAP C. NET CHANGE IN WATER LEVELS IN 1952 CAUSED BY PUMPING AT AN AVERAGE RATE OF 14.38 MGD IN THE PERIOD 1942–51



MAP D. NET CHANGE IN WATER LEVELS IN 1965 CAUSED BY PUMPING AT AN AVERAGE RATE OF 8.11 MGD IN THE PERIOD 1952–64

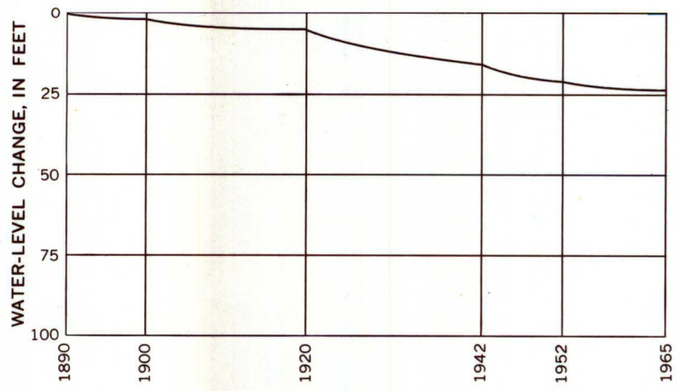
EXPLANATION

0–30 | 30–60 | 60–90 | 90 or more
Decline in water level, in feet

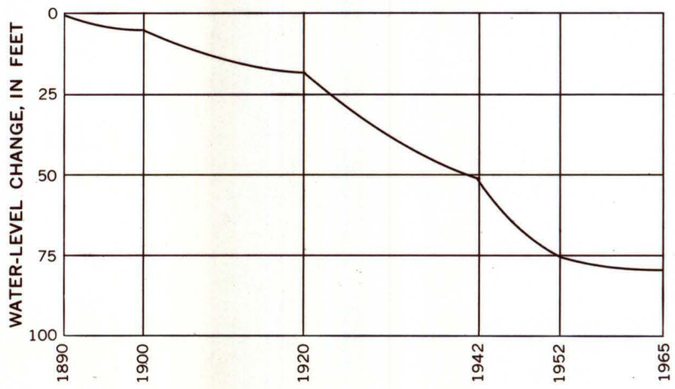
20
Line of equal water-level decline
Interval 5 feet

4
Oscillogram location and number

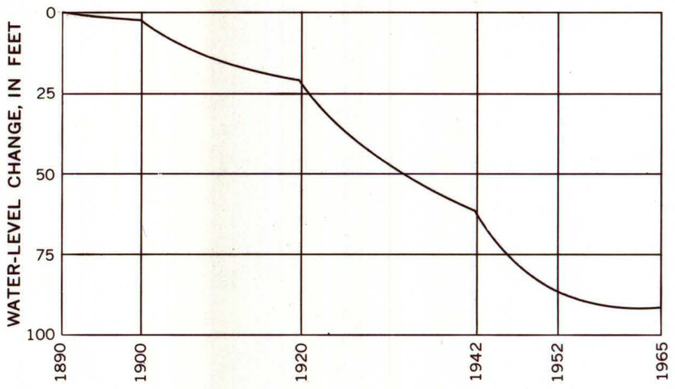
All water-level changes represent differences between levels in 1890 (figure 4) and levels in the indicated year
Recharge and discharge boundaries shown in figure 11



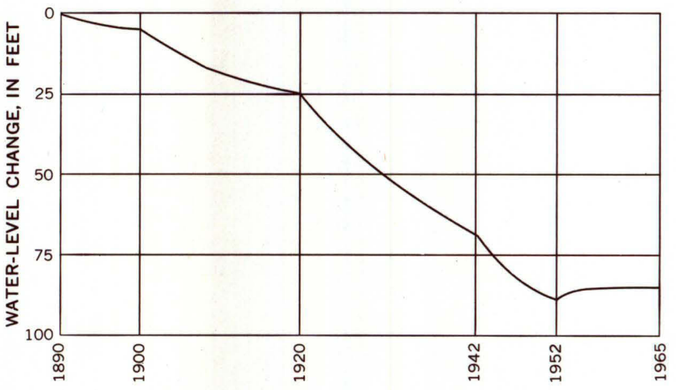
OSCILLOGRAM 1 SHOWING CHANGE IN WATER LEVEL NEAR CRESCENTVILLE



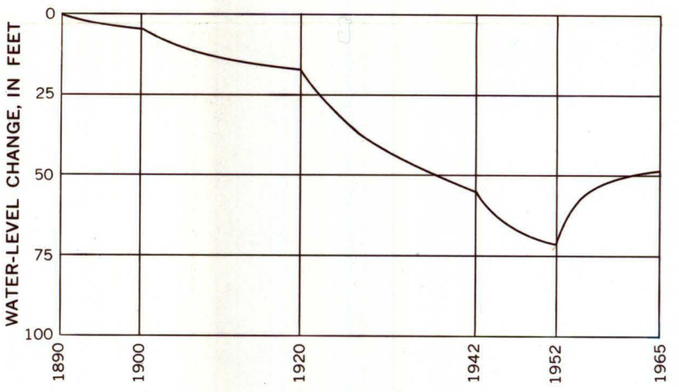
OSCILLOGRAM 2 SHOWING CHANGE IN WATER LEVEL NEAR EVENDALE



OSCILLOGRAM 3 SHOWING CHANGE IN WATER LEVEL NEAR READING



OSCILLOGRAM 4 SHOWING CHANGE IN WATER LEVEL NEAR LOCKLAND



OSCILLOGRAM 5 SHOWING CHANGE IN WATER LEVEL NEAR CARTHAGE

MAPS BASED ON ELECTRIC ANALOG SIMULATION SHOWING NET CHANGE IN WATER LEVELS RESULTING FROM GROUND-WATER PUMPAGE IN MILL CREEK VALLEY, BUTLER AND HAMILTON COUNTIES, OHIO, 1890–1964

389-674 O - 70 (In pocket) No. 2