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SURFACE WATER SUPPLY
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PART 3
OHIO RIVER BASIN

Prepared in cooperation with the States of ALABAMA, ILLINOIS, INDIANA
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preceding 3 months is stored in the form of snow or ice, or in ponds, lakes, and swamps, or as underground water, and this stored water passes off in the streams during the spring break-up. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore the run-off for the year beginning October 1 is practically all derived from precipitation within that year.

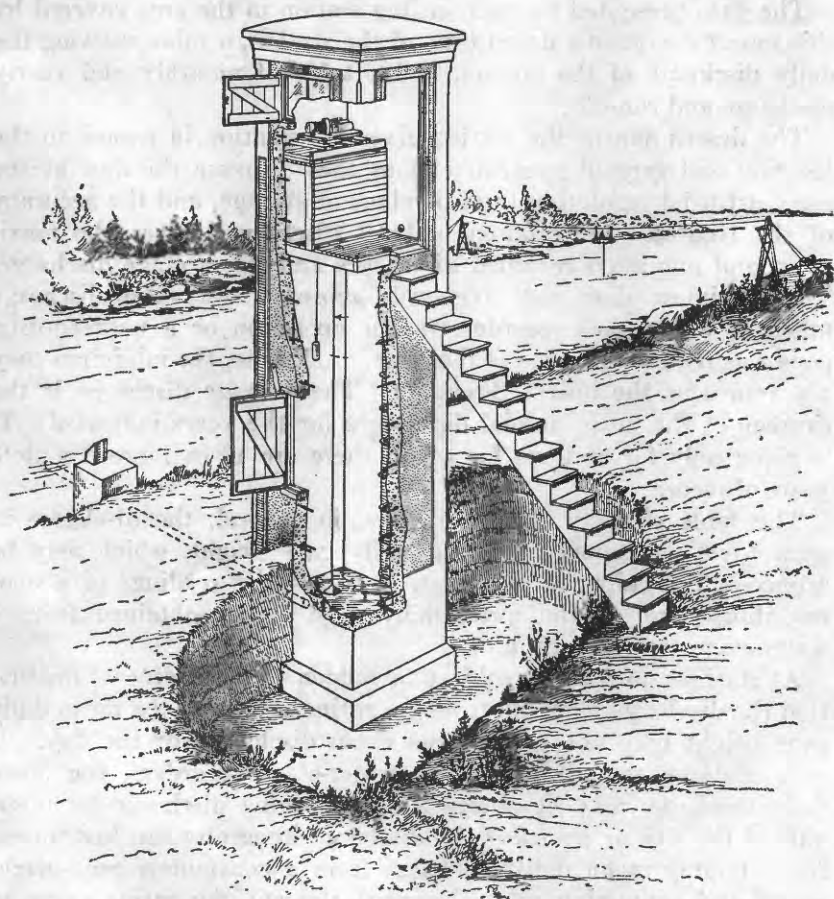


FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a staff or chain gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods

outlined in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in figure 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily gage height to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report comprise a description of the station, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off.

The description of the station gives information in regard to the location and type of gage, diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Information under "Discharge" gives the maximum and minimum recorded discharges and the average discharge. The maximum does not necessarily represent the crest discharge unless a water-stage recorder was in operation or a nonrecording gage was read at the time of the crest. Likewise, the minimum may not represent the lowest discharge. The average discharge is the average of the mean annual discharges for the years indicated. It is given only for stations for which there are 10 or more complete years of record.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height, which may be a once-daily reading or the mean of twice-daily readings of a non-recording gage, or the mean daily gage height obtained from a water-stage recorder graph.

At stations on streams subject to sudden or rapid diurnal fluctuation the discharge obtained from the rating table and the mean daily gage height may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders, the mean daily discharge may be obtained by averaging discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 2.

