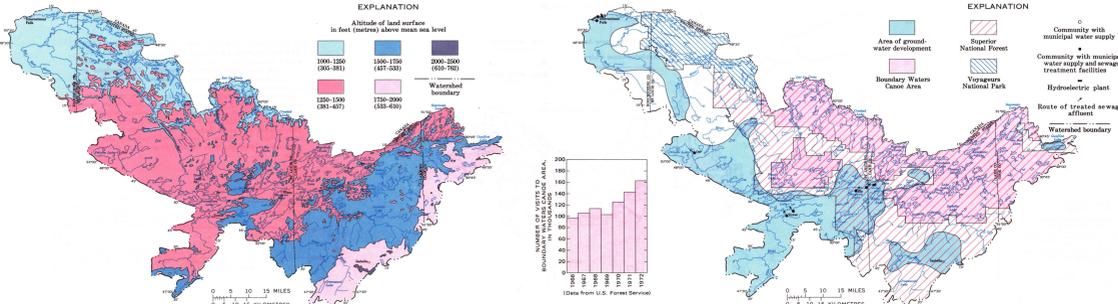
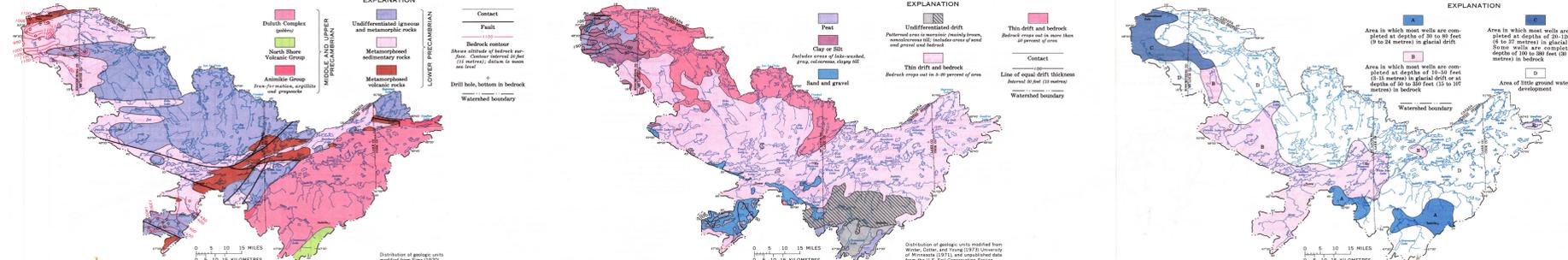


INTRODUCTION



Drainage in the Rainy Lake Watershed is northward to a chain of border lakes along the United States-Canada boundary. Water in the lake... WATER RESOURCES ARE NOT INTENSIVELY DEVELOPED IN THE WATERSHED... WATER RESOURCES ARE NOT INTENSIVELY DEVELOPED IN THE WATERSHED...

GROUND WATER



Bedrock consists of a variety of Precambrian igneous and metamorphic rocks. The bedrock surface is of near level surface to west of the watershed... GLACIAL DRIFT IS GENERALLY LESS THAN 50 FEET (15 METERS) THICK AND LATERALLY DISCONTINUOUS... SAND AND GRAVEL ZONES IN GLACIAL DRIFT ARE THE MOST FAVORABLE SOURCES OF GROUND WATER...

Table with 2 columns: TYPE OF USE, SURFACE WATER. Rows include Municipal, Rural domestic, Seasonal, and Livestock. Includes a note about water use in 1971.

Table with 10 columns: Community, Population, Source of supply, Year installed, Capacity (MGD), and various water quality parameters (pH, TDS, etc.). Lists communities like Bemis, Ely, and International Falls.

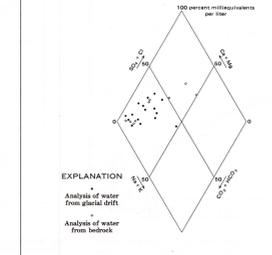


Table with 10 columns: Chemical constituents and hardness in milligrams per liter. Lists various ions like Calcium, Magnesium, Sodium, etc., with their respective concentrations.

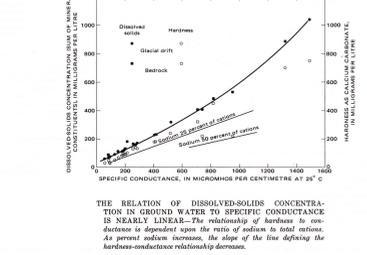
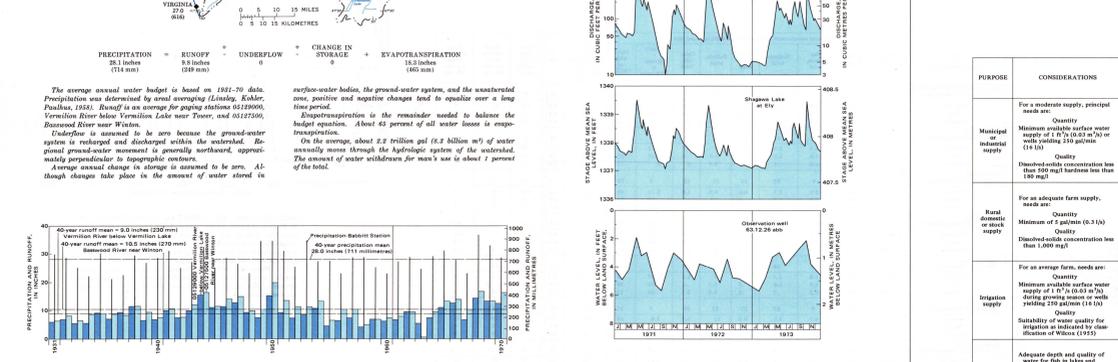
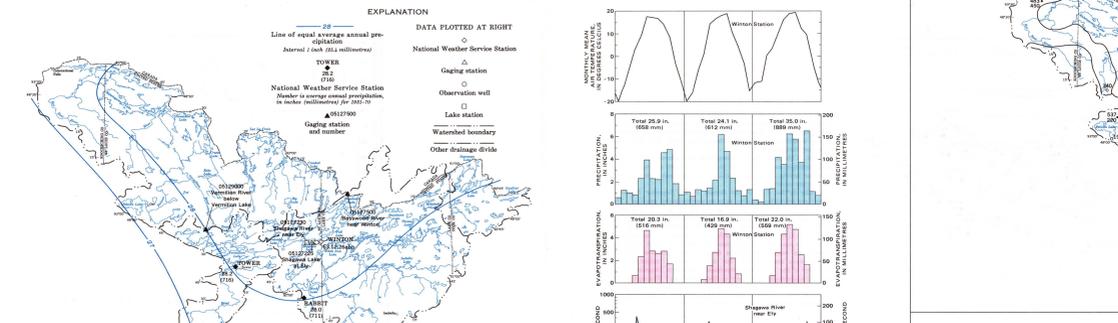


Table with 4 columns: SOURCE OF WATER, Well characteristics, Yield, and Remarks. Lists different water sources like A, B, C, and D with their respective characteristics and yields.

WATER BUDGET



LONG-TERM VARIATIONS IN RAINFALL REFLECT VARIATIONS IN PRECIPITATION... PARTS OF THE HYDROLOGIC SYSTEM ARE CLOSELY RELATED, AS ILLUSTRATED BY DATA COLLECTED NEARLY... The amount of water withdrawn for many uses is about 1 percent of the total.

SUMMARY AND CONCLUSIONS

Large table with 4 columns: PURPOSE, CONSIDERATIONS, SURFACE WATER, and GROUND WATER. Provides detailed information on water quality and usage for various purposes like municipal, industrial, and recreational.

ACKNOWLEDGMENTS: Many individuals and agencies contributed information used in this report... SELECTED REFERENCES: Linley, R. K., Jr., Kabler, M. A., and Paulsen, J. L., 1958. Hydrology for engineers... CONCLUSIONS: 1. Fifteen percent of the Rainy Lake watershed is lakes, 10 acres (1/2) or larger...

WATER RESOURCES OF THE RAINY LAKE WATERSHED, NORTHEASTERN MINNESOTA

By D. W. Ericson, G. F. Lindholm, and J. O. Helgesen

Based on U.S. Geological Survey, Hydrologic Investigation Report HA-596, 1964. Prepared for the Minnesota Department of Natural Resources, Division of Waters, Soils, and Minerals.

Hydrologic Investigations Atlas HA-596 (Sheet 1 of 2). U.S. Geological Survey, Denver, Colo. 80225 and Reston, Va. 20192.