

INTRODUCTION

The study of the ground-water resources of Appalachia, from which this atlas was prepared, was made by the U.S. Geological Survey in cooperation with the Office of Appalachian Studies, U.S. Corps of Engineers in furtherance of the objectives of the Appalachian Regional Development Act 1965. This atlas will become a part of Appendix H of the report to be published by the Corps of Engineers entitled "Report for Development of Water Resources in Appalachia." It is designed to describe, in general terms, the occurrence and availability of ground water and the cost of developing ground-water supplies. It is not intended to give specific ground-water information at specific sites—indeed the scale of the maps precludes this kind of presentation. The information in this atlas, considered with other water-resource reports will provide a basis for planning the development of water resources as a stimulus for economic growth in the region. The cost estimates, though valid for use in a regional planning study, should not be used alone as a basis for local decision.

The author wishes to acknowledge the cooperation and assistance of Col. John C. H. Lee, Jr., Director, Office of Appalachian Studies, and his staff, in developing the study of the ground-water resources. Mrs. Jo Doris DiAngelo, of the Geological Survey Office in Cincinnati, made most of the thousands of computations used in the preparation of this report. Most of the work on the map of ground-water discharge was done by O. Bruce Lloyd, Jr., Geologist of the Survey's North Carolina District Office. The State Geological Surveys and State Water Resources Agencies in the region provided much valuable information. The 12 U.S. Geological Survey Districts including parts of the region also furnished reports and basic and interpretive data collected during cooperative State-Federal programs.

The Appalachian Region, as designated by the Appalachian Regional Development Act of 1965, includes all, or parts, of 12 States and seven Physiographic Provinces, as shown on the map. Ground water occurs under varying conditions within these provinces. The occurrence, availability and cost of producing ground-water supplies is described on the following maps.

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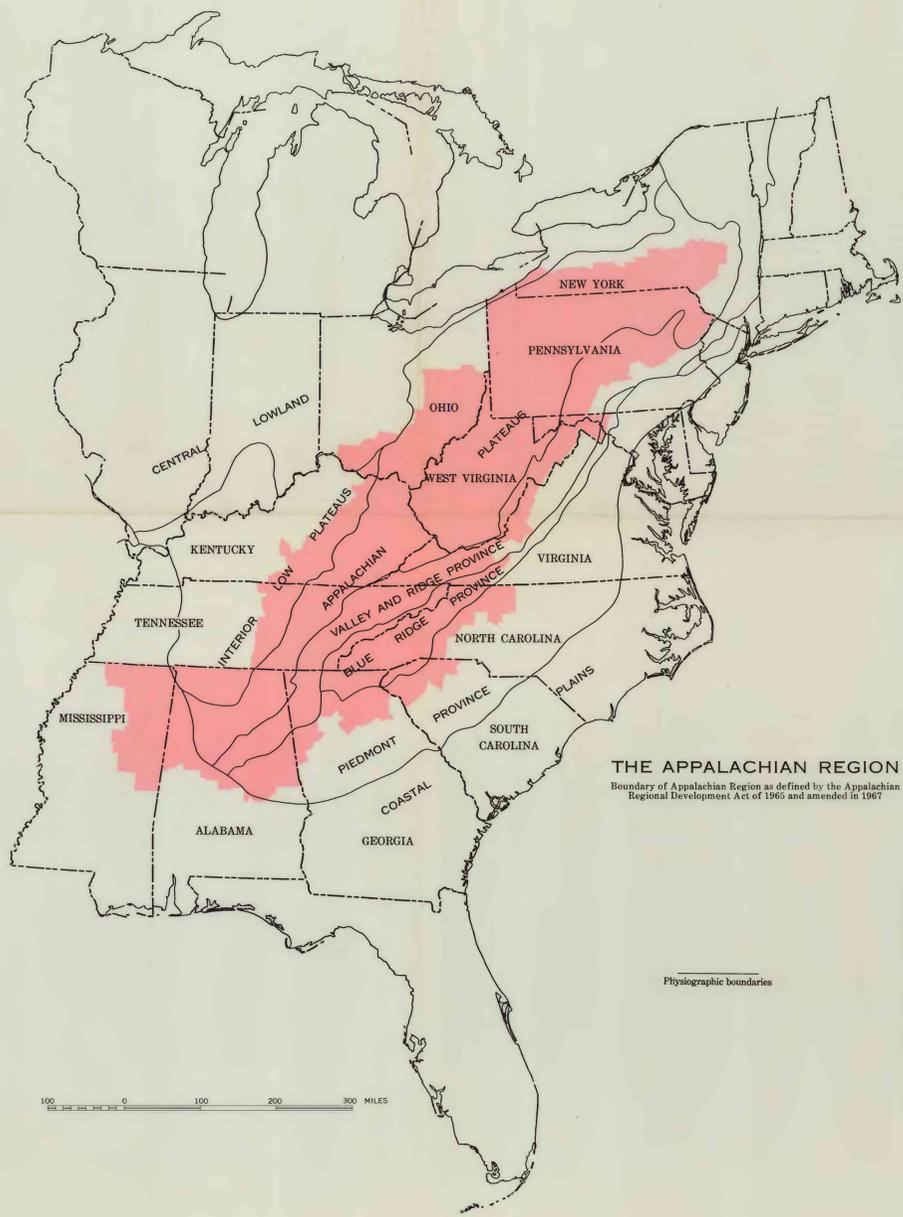
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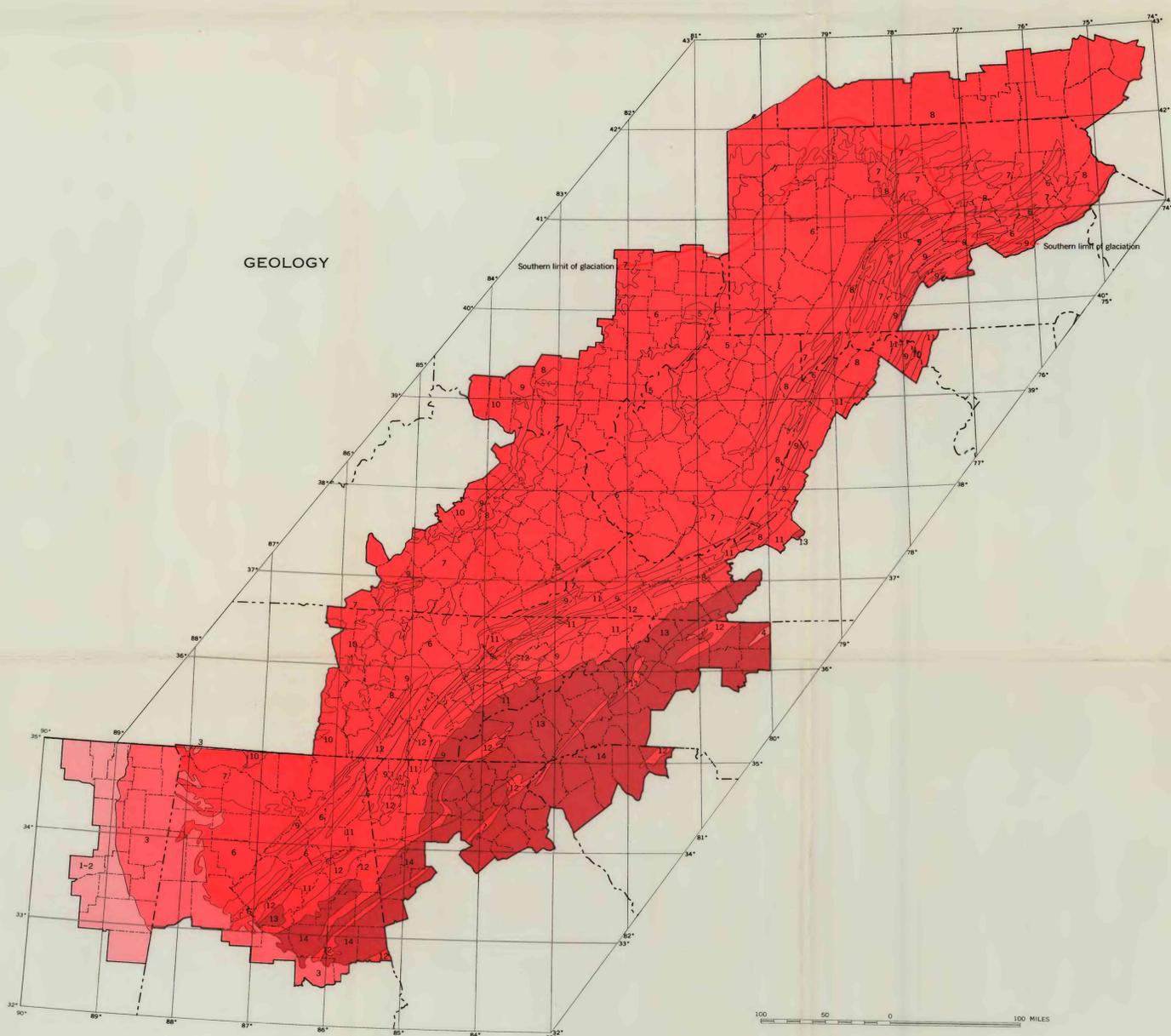
THE APPALACHIAN REGION

Boundary of Appalachian Region as defined by the Appalachian Regional Development Act of 1965 and amended in 1967

Physiographic boundaries



GEOLOGY



EXPLANATION

- | | | |
|---------|---------------------------|---------------|
| 1 | Quaternary | CENOZOIC |
| 2 | Tertiary | |
| 3 | Cretaceous | |
| 4 | Triassic | MESOZOIC |
| 5 | Permian | |
| 6 | Pennsylvanian | CARBONIFEROUS |
| 7 | Mississippian | |
| 8 | Devonian | |
| 9 | Silurian | PALEOZOIC |
| 10 | Ordovician | |
| 11 | Cambrian | |
| 12 | Paleozoic | |
| 13 | Precambrian | |
| 14 | Precambrian and Paleozoic | |
| Contact | | |

Note: Map modified from Geologic Map of North America, 1965, U.S. Geological Survey. References for individual state and organizational contributions listed on source map.

GROUND-WATER RESOURCES OF THE APPALACHIAN REGION

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