UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 441
PLATE 1

EXPLANATION

Unit 1
Unconsolidated continental deposits
Fluvial and glaciofluvial deposits beneath and bordering stream terraces. Includes pediment gravels and sand dunes, in some areas, 40–400 feet thick; outcrop area of river alluvium is about 1,200 square miles

Unit 2
Continental rocks
Lacustrine deposits of shale, siltstone and fine-grained sandstone. Includes the Wasatch, Green River, Uinta, Bridger, and related formations. Maximum thickness about 7,000 feet; outcrop area is about 33,000 square miles

Unit 3
Continental and marine rocks
Shale and sandstone. Includes the Mancos, Mesaverde, and related formations. Maximum thickness about 12,000 feet; outcrop area is about 25,000 square miles

Unit 4
Predominantly continental rocks
Massive quartzose sandstone, interbedded sandstone and mudstone, and lenticular strata of conglomerate. Includes the Glen Canyon and San Rafael Groups and the Morrison and Dakota Formations. Maximum thickness about 3,500 feet; outcrop area is about 27,500 square miles

Unit 5
Continental and marine rocks
Mudstone, siltstone and shale, and thin lenticular strata of conglomerate. Includes the Moenkopi and Chinle Formations. Maximum thickness about 1,500 feet; outcrop area is about 5,300 square miles

Unit 6
Marine rocks
Limestone, quartzite, shale, and evaporites, and continental deposits of quartzose sandstone in Utah and northern Arizona. Includes the Leadville, Hermosa, Cutler, Weber and related formations. Maximum thickness about 8,000 feet in southwestern Colorado and southeastern Utah; outcrop area is about 6,900 square miles

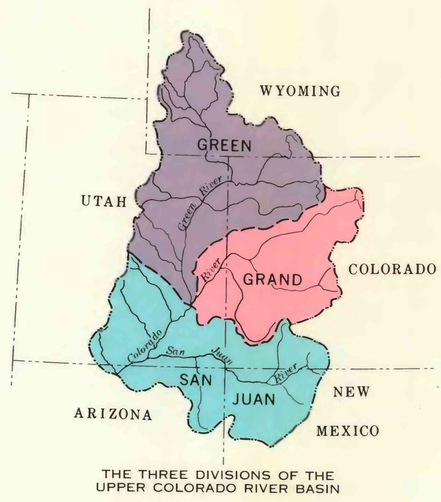
Unit 7
Igneous rocks
Volcanic and intrusive basalt, andesite, diorite, and others. Includes lava flows and related ejectamenta and intrusive laccoliths and diatremes; outcrop area is about 3,500 square miles

Unit 8
Igneous and metamorphic rocks
Schist, granite gneiss, granite, and granite pegmatite. Forms the basement complex upon which units 7 to 1 rest; outcrop area is about 7,900 square miles

Contact
Dashed where approximately located

Fault
T, indicates overriding side of thrust fault

10
Isohyetal contour
Showing estimated average annual precipitation in inches, for 28 year period 1921-50



THE THREE DIVISIONS OF THE UPPER COLORADO RIVER BASIN

Base compiled, edited, and published by the U.S. Geological Survey
1927 North American datum. Lambert conformal conic projection based on standard parallels 33° and 45°
Source data: U.S. Department of the Interior, Geological Survey Topographic maps
U.S. Department of the Army, Army Map Service 1:250,000 scale maps
U.S. Department of Commerce, Bureau of Public Roads maps

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Hydrologic units compiled from geologic maps for eastern Utah and for the States of Colorado, Wyoming, New Mexico, and Arizona with revisions and additions by D. A. Phoenix
Isohyetal lines (average 1921–50 calendar years) prepared by E. L. Peck and M. J. Brown, U.S. Weather Bureau, Salt Lake City, Utah, 1960

MAP OF UPPER COLORADO RIVER BASIN SHOWING THE DISTRIBUTION OF HYDROLOGIC UNITS AND THE AVERAGE ANNUAL PRECIPITATION

SCALE 1:1 000 000

25 0 25 50 75 100 MILES
25 0 25 50 75 100 KILOMETERS

CONTOUR INTERVAL 1000 FEET
DATUM IS MEAN SEA LEVEL