

Table 1.--Geologic formations and their water-bearing characteristics.

(Modified from Eargle, 1968)

System	Series	Group	Unit	Maximum thickness (feet)	Lithologic character	Water-bearing characteristics	
Quaternary	Holocene to Pleistocene		Alluvium	200	Clay, silt, sand, and gravel.	Deposits in stream valleys furnish water supplies for small domestic wells. Supplies large irrigation along the Mississippi River.	
			Loess	50	Brown calcareous silt with shells.	Not an aquifer in this area.	
Tertiary	Pliocene		Citronelle Formation	150	Gray to mottled red-orange silty clay, sand, and gravel.	Not an important aquifer. Supplies shallower domestic wells.	
	Miocene		Pascagoula and Hattiesburg Formations undifferentiated	1,800	Greenish-gray silty clay, sand, and gravelly sand.	Important aquifers. Largest potential source of ground water in the State. Estimated hydraulic conductivity of 100 (ft <sup>3</sup> /d)/ft <sup>2</sup> . Supplies many municipal and industrial water users in the salt-dome basin.	
			Catahoula Sandstone	2,800	Gray to olive sand, silt, and silty clay. Downdip--white to gray sandy limestone and marl; glauconitic, calcareous sand.		
	Oligocene	Vicksburg		Chickasawhay Limestone	470	Gray to white sandy limestone and fossiliferous sandstone and clay.	Not an aquifer in this area.  Not an important aquifer. Supplies some domestic wells in the northern part of the salt basin. Contains slightly saline water in the southern parts of the basin.
				Byram Formation/ Bucatanna Clay Member		Calcareous clay and white to gray sandy limestone, marl (Glendon Limestone Member).	
				Marianna Limestone	300	White to gray sandy limestone, marl.	
				Forest Hill Sand/ Red Bluff Clay		Gray, fine sand and clay interbedded and soft fossiliferous limestone.	
	Eocene	Claiborne	Jackson	Yazoo Clay (Cocoa Sand Member)	550	Oliver to gray calcareous clay.	Not an aquifer in this area. Cocoa Sand Member of Yazoo Clay is considered minor local aquifer in northeastern part of salt-dome basin.
				Moodys Branch Formation (Ocala Limestone to the south)		White sandy limestone, fossiliferous, glauconitic.	
				Cockfield Formation	550	Lignitic clay and fine sand.	An important freshwater aquifer in northern half of salt-dome basin. Contains saline water in the south-half.
				Cook Mountain Formation	280	Hard to soft white calcareous sand and glauconitic, bentonitic clay.	Not a freshwater aquifer in this area. When limestone is present, contains saline water.
				Sparta Sand	1,000	Gray shale and thin siltstone, interbedded.	An important aquifer with moderate to large yields to industrial, municipal and domestic wells in the north-half of salt-dome basin. Contains saline water in the south-half.
			Zilpha Clay Winona Sand Tallahatta Formation	500	Glauconitic marl, green sand, and shale.	Not aquifers in this area.	
Tertiary	Paleocene	Midway	Undivided	3,200	Gray, fine-grained sandstone and green to gray shale, interbedded. Chalky white fossiliferous limestone.	Important freshwater aquifer north of Jackson, but contains saline water in salt-dome basin.	
			Naheola Formation Porters Creek Clay Clayton Limestone	1,050 25	Gray shale. Limestone	Not an aquifer in this area. Not an aquifer in this area.	
Cretaceous	Upper Cretaceous	Selma Group	Eutaw and McShan Formations undifferentiated	1,500	White chalk to gray marl, shale, and calcareous sandstone at base.	Contains saline water.	
		Tuscaloosa	Gordo Formations and Coker Formation (includes marine Tuscaloosa and lower Tuscaloosa of oil geologists with "massive sand" at base)	1,160	Shale and some sandstone, mostly marine deposits (includes thick sand, containing few shale lenses at base, and some gravel).	Contains saline water	
	Lower Cretaceous		Dantzler Formation	1,150	Red to gray mottled shale, buff, red and green sandstone and stone.	Not an aquifer.	
			Andrew Formation	1,880	Limestone, sandstone, and gray to green shale.	Not an aquifer.	
			Paluxy Formation	1,450	Sandstone and shale, buff, pink, white, micaceous.	Not an aquifer.	
			Mooringsport Formation	1,000	Marine shale, some sandstone.		
			Ferry Lake Anhydrite	240	Anhydrite, shale, limestone.		
			Rodessa Formation, James Limestone, and Pine Island Shale, undifferentiated.	750	Limestone, shale, sandstone, anhydrite (hard calcareous sandstone, gray to red limy micaceous shale, oolitic to finely crystalline limestone).	Not an aquifer.	
	Sligo Formation	300	Sandstone, shale, mudstone, reddish, to greenish gray.	Not an aquifer.			
	Hosston Formation	2,650	Sandstone, red shale conglomerate.	Not an aquifer.			
Jurassic	Upper Jurassic		Cotton Valley Formation	2,900	Sandstone, shale, mudstone, red to purple, and green.	Not an aquifer.	
			Haynesville Formation (includes Buckner Member)			Not an aquifer.	
			Smackover Formation Norphlet Formation	3,450	Sand, sandstone, shale (red beds), oolitic limestone.	Not an aquifer. Not an aquifer.	
Jurassic			Louann Salt	6,000	White coarsely crystalline halite.	Not an aquifer.	